

# **DISTRIBUTION AND WAREHOUSING**



**The Business Paper of the Warehouse Industry**

Vol. 25, No. 6

243-249 West 39th St., New York, N. Y.

June, 1926

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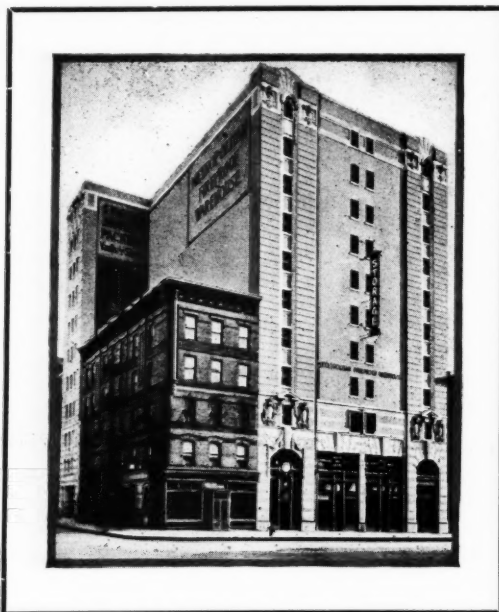
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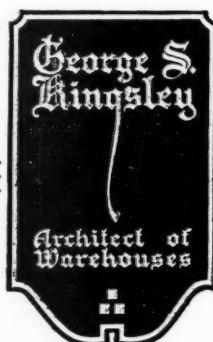
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WHEN WRITING ADVERTISERS MENTION DISTRIBUTION AND WAREHOUSING



# DISTRIBUTION AND WAREHOUSING

The Business Paper of the Warehouse Industry

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Vol. 25 CONTENTS—JUNE, 1926 No. 6

## ARTICLES

- The Right Machine on the Right Job Cuts Labor  
and Saves Time ..... 7
- Warehousing's Terms and Conditions Have Now  
Been Standardized. By Kent B. Stiles..... 30
- A Cost Record System for Motor Truck Owners.  
By Jay S. Tuthill..... 33
- Public Warehousing and Economic Distribution.  
No. 15. How the "Customers' Accredited List"  
System Operates for the Shipper. By H. A.  
Haring ..... 36
- Distributing Small Shipments Through Warehouse  
and Railway Terminals. By Uthai Vincent Wilcox 39
- New Business for Warehouses. VII. Why Coopera-  
tive "Education" of Prospects Is Needed..... 42
- Household Goods Warehousing in the United States.  
Chapter VII. Control of Insect Pests. By Clar-  
ence A. Aspinwall..... 44
- The Effect of Knots on the Strength of Bracing  
Carload Freight. By R. P. A. Johnson..... 50
- "Self-Government in Business" is Plea of Chamber  
of Commerce. Story of Washington Convention.. 54

## DEPARTMENTS

- The Old Family Album. No. 3. Walter C. Reid..... 52
- "Two Bits" (Vol. VI; No. 12)..... 53
- What's What in New Buildings (IIC)..... 53
- With the Associations..... 60
- Construction, Purchases, Incorporations, Etc..... 74-76
- "Andy Says" and Convention Calendar..... 79

## NEWS

- N. Y. Warehousemen Protest Leasing of City Piers..... 32
- Bankers' Committee Urges Curb on Truck Services..... 35
- "Tracking" Qualities of Trailers Are Improved..... 49
- Freight Handling Breaks All Records..... 51
- Walter C. Reid Is Guest at New York Banquet..... 68
- Peter P. Terhune Dead, Victim of Auto Mishap..... 70
- Hearings Begun on Minnesota Truck Applications..... 70
- Poole Elected President of Quincy Market Co..... 72
- Harvard and Yale Honor William A. Melkleham..... 72
- New York Dock Earned Higher Net Profit in 1925..... 76

- Classified Advertising ..... 150
- Index to General Advertisers..... 150
- Index to Shippers Index Advertisers..... 151-152-153

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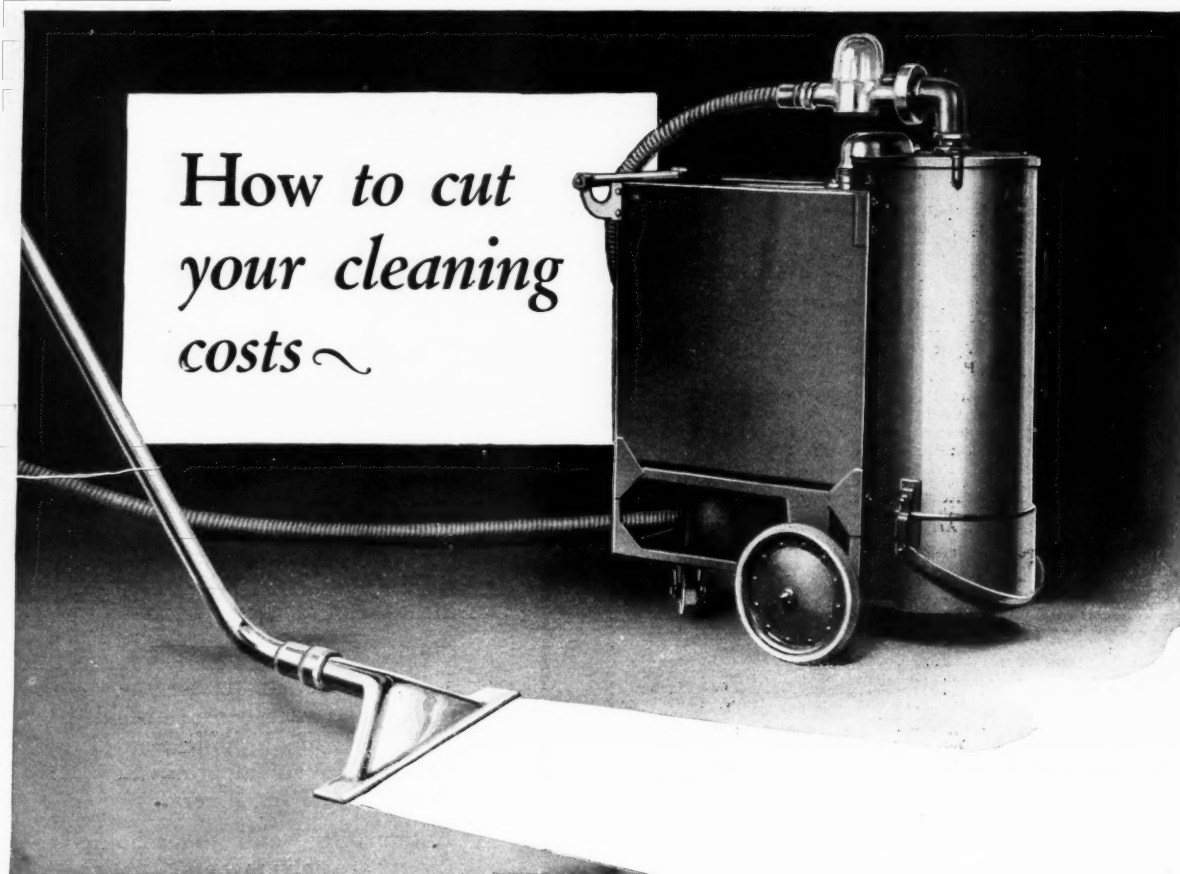
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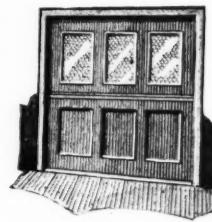


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# **DISTRIBUTION AND WAREHOUSING**



**The Business Paper of the Warehouse Industry**

Volume 25

NEW YORK, JUNE, 1926

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## **The Right Machine on the Right Job Cuts Labor Costs and Saves Time**

***No One Handling Device Can Take Care of All Storage Variations of Size and Weight, but Intelligent Installations for Certain Operations Will Pay for Themselves  
—As Here Told in Texts and Pictures***

**T**IMELY in connection with this annual Material Handling and Equipment issue of *Distribution and Warehousing* was a meeting of the Society of Terminal Engineers, in New York on May 11, at which the subject "Relationship of Warehouses to Terminals" was discussed from the viewpoints of the public storage executive and the terminal engineer. What Col. P. L. Gerhardt, vice-president of the Bush Terminal Co., New York, told the engineers at that gathering may be said in a sense to symbolize the spirit of this June number devoted in large part to the uses and economic advantages of labor-saving machinery in and around the warehouse plant—the scientific handling of commodities, in other words.

Warehousing recognizes, as Colonel Gerhardt said at the engineers' meeting, that there is no mechanical appliance today which can take care of the storage variations—packages ranging from 1 lb. in weight to nearly 2000 lb.

"If you can produce any such appliance," Colonel Gerhardt said to his audience, "all warehousemen will buy it, but I do not believe you can produce anything along that line scientifically. Mechanical appliances that will operate at least 75 per cent of the time and can handle 75 per cent of the business—that

is the warehouseman's problem. Warehousemen will pay a lot of money for scientific appliances which will reduce labor costs."

Colonel Gerhardt made his remarks as part of discussion which followed an address by William J. Hogan, Indianapolis, president of the National Terminals Corporation which operates merchandise warehouse plants in Indianapolis, Cleveland, Detroit, Chicago and Cincinnati. Talking on "The Relation of Warehouses to Terminals,"\* Mr. Hogan gave the engineers this thought:

"The equipping of a warehouse with labor-saving devices is, of course, quite essential, providing such devices have proved practical. However, to put in conveyors, chutes, monorails, hoists and dozens of other expensive devices without a careful analysis as to just how much of this equipment will be in use the better part of each day, and also as to whether such devices will handle the various kinds of packages that will pass through the warehouse, and whether they will handle only certain size or shaped packages, is very poor judgment, and yet this often occurs."

Mr. Hogan cited specific instances of warehouses

\*Mr. Hogan's address will be published in the July Issue.

where material handling machinery had been installed, only to have the plant operators discover that it was being utilized so small a part of the time that the expense of putting it in was not justified, making the machinery a white elephant on the warehousemen's hands.

Both Mr. Hogan and Colonel Gerhardt urged the engineers to make a scientific study of the individual storage executive's problems with relation to storing and handling commodities before undertaking to make installations of labor-saving machinery.

**"P**ROVIDING such devices have proved practical," Mr. Hogan said in his talk. This brings to the front the question "Just what is practical in relation to the installing of such devices?" As Colonel Gerhardt pointed out, there is no mechanical appliance that takes care of the many size and weight variations that come into the warehouse.

But there are various devices which do special jobs, and unquestionably the use of these on such jobs is economical—reducing labor costs and effecting saving of time. Such devices are in use today in many warehouses throughout the country, and the

purpose of this special Material Handling and Equipment issue is to tell something about this machinery and how it is being operated to the warehouseman's advantage.

Accordingly there are spread on the following pages some facts along this line which have come to *Distribution and Warehousing* from two sources—warehousemen who find that certain installations benefit their business, and editorial correspondents who have interviewed storage executives on the subject. The topic is covered from the angle of both the merchandise and the household goods warehousemen, and it is believed that a careful reading of these various texts will give the reader some ideas very well worth while.

In passing it may be here stated that quite a number of storage executives, explaining that they make no use whatever of material handling machinery, have, nevertheless, expressed a keen interest in the subject, in letters to *Distribution and Warehousing*, stating that they wanted to know what "the other fellow" was doing along this line.

So here are some of the things that "the other fellow" is doing:

A Varied Assortment of Handling Machinery  
Is Used by Los Angeles Warehouse Co.

**H**OW does the Los Angeles Warehouse Co. manage to maintain a very creditable volume of business—this firm's seven warehouses now are filled to 75 per cent of capacity—during these dull times?

The labor saving equipment installed by the company makes possible its continued success in the face of much close competition. Several of its buildings are quite old, the main warehouse having been erected when modern conveyors were unknown. Construction therefore was not planned to accommodate such equipment. It has been installed, nevertheless, together with other labor saving devices.

The Los Angeles company offers the public both household goods storage and commercial warehousing. In this latter department one of the largest items of expense is the cost of handling goods; therefore it is important to reduce this item to the minimum.

Handling small lots of merchandise

not only costs the warehouse much time and labor, but takes heavy toll of the consumer, in the form of truck operation expense. Anything that will expedite this operation therefore not only cuts down warehouse operating costs but saves time and money for patrons—a point which the latter are quick to appreciate.

Getting sacked goods and small packages quickly down from upper floors is accomplished by means of a spiral chute, sometimes called a corkscrew conveyor. Installation difficulty was encountered because the steel beams which support the concrete floors are only six feet apart each way, center to center. The clearance above the floor of the chute is only 22 inches, which prevents the passage of large packages.

This chute, which was furnished by the Haslett company, San Francisco, has a bed 30 inches wide and a lower side wall 10 inches high. The bottom end extends onto a loading platform 3 feet high. Transferring goods from platform to truck required a good deal

of time, which now is saved by using an adjustable spout. The latter was designed by John Broadhead, resourceful foreman of the Los Angeles company's commercial department.

The spout is 10 feet long and about the same size and shape as the main chute, but just enough narrower to permit its fitting inside the latter. At the upper end aprons have been riveted to both bottom and sides of the chute. The upper end of the spout slips underneath these aprons, preventing packages from catching onto the spout.

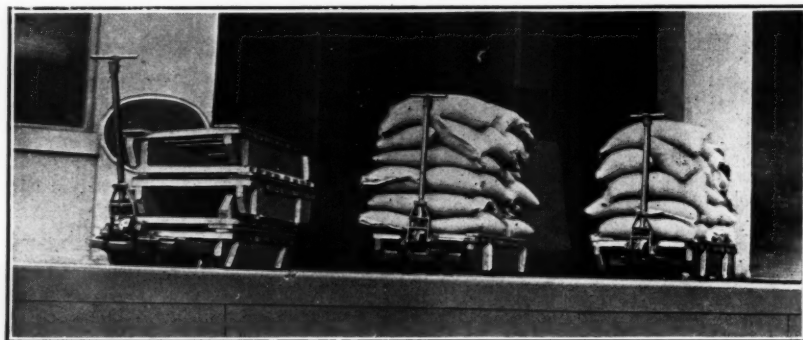
By means of three blocks-and-tackle the spout is swung from the ceiling above. One of the small ropes which supports the upper end is fastened in such a position that it holds the spout from slipping down when struck by sliding packages. The rope and pulleys at the lower end of the spout enable the latter to be raised or lowered according to the height of the truck bed. Two-inch pulleys and three-eighths inch cotton rope are used.

The checker stands on the loading platform, which has been needed for no other purpose since the movable spout was installed. Truckmen report that in loading goods from some other warehouses they are required to lift packages a height of one foot. Such experiences make them boosters for the Los Angeles company's method.

The speed with which it is possible to convey merchandise from an upper story by means of this spiral chute with adjustable spout is indicated by the fact that 17 tons of sacked goods was loaded out in 35 minutes. The operators take pride and pleasure in making such speed records.

To obtain a clearer idea of how such speedy service is possible, let us follow an order from the time it leaves the office until it is filled.

First the order is sent through a



Six "submarine" service trucks are used by the Los Angeles Warehouse Co. in storing goods



pneumatic tube from the office to the loading desk—a trip which requires only 10 seconds.

The order next is sent to the floor where the required goods are stored, through a conveyor, which resembles a tiny dumb waiter. This contrivance, which also is the work of Mr. Broadhead, consists of a chute 4 by 5 inches, inside measurement, made of 1-inch boards and extending from the loading office to the top floor of the warehouse, with openings at each floor.

A light open box fits loosely inside the chute and is attached at one side to a large cord, which runs over a 2-inch pulley both at the top and the bottom of the chute. One-half the length of the cord works outside the chute, where it is accessible to the operator, forming an endless belt conveyor.

Black marks on the cord indicate the position of the box inside the chute. Thus, when the box reaches the third floor that portion of the cord nearest the operator in the office carries three black marks.

The warehouseman in charge of the floor where the desired goods are stored is notified by an electric "buzzer" which is operated with push buttons in the office. The third floor man is called by three rings, fifth floor by five, and so on.

When a floor man wishes to notify the office that a paper is being sent down he pushes a button, which rings a bell below. It also is possible to talk to the office from any of the upper floors through the bill chute, which has been found superior to a speaking tube for this purpose.

When an upper floor man is ready to send down goods through the loading chute he presses another button, which rings a buzzer at the lower end of the chute.

When the checker below desires to notify the worker above to stop sending down goods he presses a button, which rings the bell above, the number of rings corresponding to the number of the floor.

It should be noted that at the loading chute the bells are on the upper floors and the buzzers below, while at the bill chute this order is reversed.

The spiral chute has been in use eighteen months and in that time has paid for itself, according to Mr. Broadhead.

#### Other Machinery

One of the most satisfactory implements used by the Los Angeles company in handling goods in its commercial department is a Revolvator stacker, made by the Revolving Portable Elevator Co., New York City, according to Mr. Broadhead.

The Revolvator easily can be turned to face any direction without moving the wheel base. The safety lock is another great advantage. The crank handle, which is used to elevate the load, is removed and attached to the lowering device. The weight of the



*This Haslett spiral chute or corkscrew conveyor enables the Los Angeles Warehouse Co. to get sacked goods and small packages quickly down from the upper floors*

crank acts as a brake and lock, automatically preventing the platform from dropping down accidentally.

Five other stackers of different makes are used and are quite satisfactory.

Five barrel trucks also have been found useful and convenient. Each of these implements has an iron hoop, which is thrown over the barrel. A notched iron support at the bottom prevents the load from slipping down.

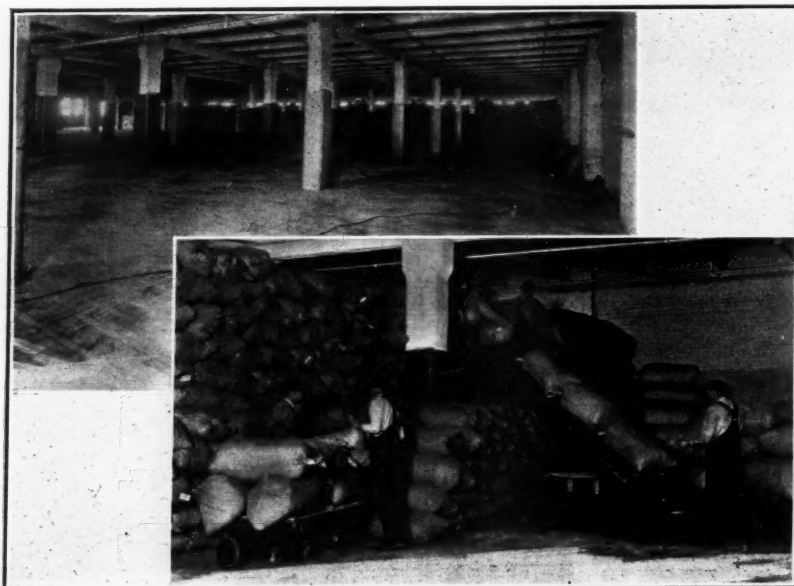
A transformer truck has been found a great convenience, rendering possible the handling of a half-ton load by one man without physical strain. A hook-and-chain tilts the package back at an angle of 45 degrees. The load rests on a horizontal 4-wheel truck, thus relieving all strain from the operator's arms and obviating the danger of the load

tipping forward. This truck has been in satisfactory use for five years.

Sacks and small packages often are piled onto wooden sleds, which are made of two-inch planks. Each one is 5 feet long, 3 feet wide and 8 inches high. They were made at odd times of waste packing material and therefore cost nothing.

Six service lifts, made by the Service Lift Co., San Francisco, are used to move these sleds when the latter are loaded. Workmen call them "submarines," because they run underneath the sleds. The handle is used for jacking up the sled onto the lift and for lowering it onto the floor. (See illustration on page 8.)

When the necessary space is available, large quantities of goods are piled



*This electrically-operated adjustable portable stacker has cut down handling costs in the Kansas City, Mo., plant of the United Warehouse Co. Upper view, starting to load United space with merchandise in bags; lower, completing the loading*

onto sleds and left there until moved out of the warehouse. Recently 2000 cases of Saniflush were stored in this manner.

Llewellyn freight elevators, made by the Llewellyn Iron Works, Los Angeles, are used to lift goods to the upper floors. Each one has a platform 10 by 12 feet and is capable of lifting 3000 pounds.

Seven built-in scales of similar capacity, with platforms each 40 by 50 inches, are used in the company's seven warehouses, together with one portable scales.

A new Fairbanks-Morse 5-ton scales, with platform about 5 by 8 feet, round dial indicator, has been purchased and is to replace one of the old scales in the near future. The other old scales are to be replaced with new machines, but no definite arrangements for this change have yet been made.

—O. H. Barnhill.

How United Warehouse Co., Kansas City, Mo., Reduces Handling Costs With a Portable Stacker

**C**OMPARATIVE study of bag-merchandise handling costs led the United Warehouse Co., operating plants in Kansas City, Mo., and Wichita, Kan., to install an electrically-operated adjustable portable stacker for its Kansas City business. In the three years since the stacker has been used there the United has had a large and increasing volume of bran. As the quotation, based on man-hour costs, combined with the service, holds business, the assumption is that the stacker deserves some credit for this volume. The practical experience and observation of the warehouse executives testify to the same effect.

The Wichita house of the company has developed a big volume of sugar handling. The Kansas City warehouse was rather specializing at that time on bran. The Wichita house was making a far better record on handling costs than was the Kansas City plant. Analysis proved quite conclusively that the stacker at Wichita was the key to the discrepancy.

Immediately after putting the stacker into service in Kansas City man-hour costs went down. The books show it. Lots handled previously ran 13 to 16 man-hours per car, for the bran—varying partly according to the floor stored on. With the stacker the time per car was reduced under 10 man-hours.

Conversation with Walter Metcalf, Jr., assistant manager of the company, at Kansas City, discloses the practical reasons for the savings and their relation to the operation.

For cost finding purposes it was sufficient to know that 5 or 6 man-hours are saved per car. Part of this comes from the fact that fewer men are used on the floor, in stacking. With manual stacking of bags, the services of 5 men are required; with the stacker, 3 men do the piling. One man moves the bags from the warehouse truck to the stacker, which carries the bags up to the desired height to 2 men who do the piling.

But this is only one element in the savings. These 3 men, working with the stacker, handled faster than 5 men could without the aid of the machine—for two reasons:

First, because the man below can feed the stacker fast enough to keep the two men above busy. How fast? He puts on a bag every two to four seconds—or a truckload, 14 bags, in a much shorter time than two minutes.

Second, speed is made because the work is so much easier. The men can work steadily, continuously, under the lighter physical strain. Therefore they get more work done in an hour's time, and can keep up the pace hour after hour.

Indeed, before the stacker was installed the practice was to change shifts of piling, letting the crew from the car swap tasks with the pilers so that the latter might have a rest. No such shifts are necessary now.

Note this, incidentally: with fewer men, many labor elements are reduced—liability insurance, for instance, which is based on payroll. Furthermore, the liability is actually reduced, though not showing in the record yet, as there is less hazard with the stacker piling. This is due to the fact that the 2 men on the pile are not under heavy physical strain; they receive at the thigh, with small distance to move the goods; they do not have to bend their backs to the extent as before; they can, and do, pile carefully and regularly. Manually-piled bags have been known to topple and slip, burying men.

Besides the savings in man-hour and physical strain there is the actual economy in warehouse space. It is possible to pile as high, manually, 12 bags—but not feasible. The cost of high manual piling, requiring the men to exert such effort, amounts to where the warehouse could not perhaps compete for the business. With the stacker, bags can be, and are, piled to the ceiling.

The general speeding up of processes, with the stacker in use, is apparent. Formerly the manual pilers were wont to fall behind, stopping to rest or fumbling because of weariness, or merely unable to keep ahead of the stream of trucks that "theory" suggested for normal with man-power available. In those cases the trucks could be blocked on the floor, waiting for unloading, and the crew at the car had to wait for trucks to load.

Now a steady stream can be maintained from car to floor—not only because the piling crew can keep up its speed steadily but because the requirements of man-power are accurately known and can be depended on.

Naturally the men are in good condition the entire day; they are not worn out at closing time.

When only four or five cars of bran are coming in during one day, one crew handles the bran on the floor, with the stacker. The warehouse trucks are put on the elevator by the car-unloading crew, the rope is pulled, the elevator rises and stops at the working floor. The stacker crew runs the truck to the piles, piles six high; then utilizes the stacker.

But when the bran pours in, as sometimes it does, fifteen or twenty cars a day, an extra floor crew is used; the checker runs the elevator, also running the trucks to the piles. The extra crew piles six high, the stacker crew following to add the additional tiers.

The use of the stacker seems to re-

duce the difference in the handling costs as between higher and lower floors.

It would appear—although this point is not stressed by the company—that with the stacker a considerably larger margin of safety is provided for the merchandise, in bags, that might be susceptible to breakage, moisture, or contamination. Certainly the handlers have the bags in their arms for an appreciably shorter time, and move them shorter distances.

It "just happens"—maybe—that the United has thus developed sugar handling in Wichita and bran handling in Kansas City, and that the stacker appears as so important a factor in bag piling. The company does not use the stacker on other packages, which do not arrive in large volume. But the stacker is considered quite as useful for casework as for bags.

—Ben S. Brown.

Starkey Tractor-Trailer Combination Box Car Van Saves Time and Reduces Costs.

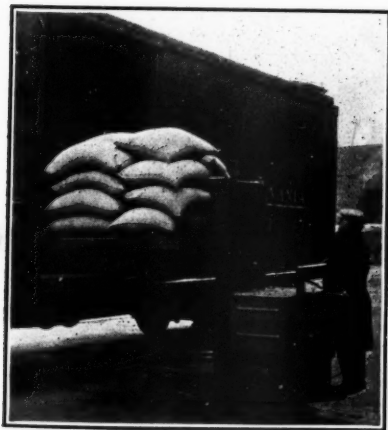
**I**LLUSTRATED herewith is the Starkey box car van of the Starkey Transfer & Storage Co., Sacramento, Cal. This body is on a low bed trailer hooked up to a special designed tractor, the manufacturers being the Reliance Trailer & Truck Co., Inc., San Francisco.

Results obtained through the use of this furniture moving vehicle are elimination of high lifting, reduction of waste motion and time in loading and unloading the goods, and consequent minimizing of moving costs.

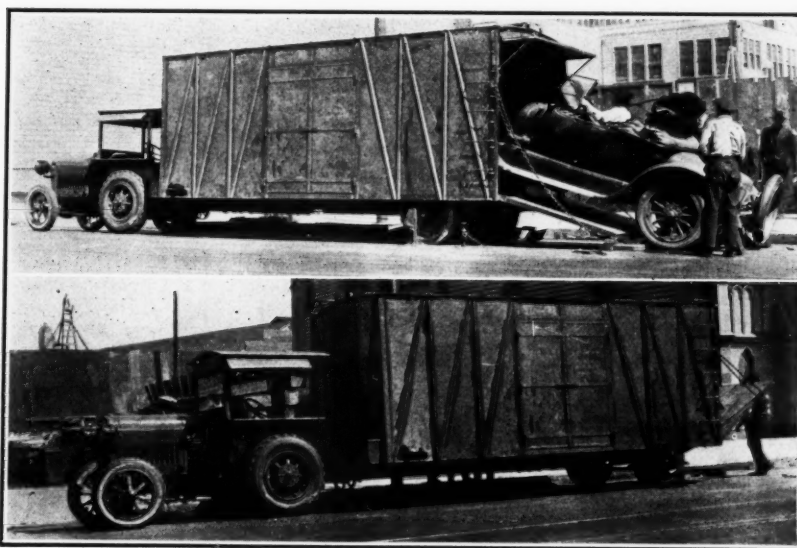
The uncoupling of the tractor, after the van is spotted, releases the tractor for other uses during the time consumed in loading or unloading the van itself. Thus the utility of the entire unit is increased.

This tractor-trailer combination is capable of operating at an average speed of 15 miles an hour.

The Reliance tractor semi-trailer attachment allows the van to be turned in as short a radius as is required for the



Yale lift truck, with 20 bags on platform, used by New York Dock Co. to reduce cost of loading freight cars



The Starkey Transfer & Storage Co.'s box car van. Above, rear view, showing end gate which provides an incline for furniture movers to walk up; below, front view of van

tractor. This permits of performance of flexibility when operating in tight places of congested traffic.

One of these units left Sacramento at 5:50 a.m. on May 4; arrived in Los Angeles at midnight on the 6th; left Los Angeles at 4:45 a.m. on the 9th, for the return trip, and arrived in Sacramento at 4:05 p.m. on the 11th. Total mileage, 922, during which 124½ gallons of gas and 3 quarts of oil were consumed.

—Charles W. Geiger.

New York Dock Co. Utilizes Lift Truck to Cut Down Costs in Loading Freight Cars.

**D**URING the past year the New York Dock Co. has acquired a lift truck (illustrated herewith) which, according to D. L. Tilly, vice-president, has performed satisfactorily. Mr. Tilly says: "In the green coffee district of the New York Dock Co.'s warehouse system much of the coffee shipped over the railroad serving the plant is delivered to the wharf in front of warehouses for weighing and then transferred to cars. Sometimes it is necessary to move the bags a few hundred feet in order to reach the car in which it is to be shipped. By using the lift truck and platforms on casters, twenty bags weighing 132 lb. each are moved to the car; the platform is elevated above the car floor; the machine moved ahead, and the platform dropped on the car floor. It is then pushed to the proper place in car and the bags piled.

"The men on the wharf continue to load other platforms while this operation is going on, so that the entire gang of five men, including the operator of machine, who also acts as tallyman, is kept busy.

"A substantial reduction in the cost of loading freight cars was accomplished in this way. The machine has a capacity

of 4000 lb. and a speed of about 6 miles an hour. It is used for various operations, but principally for loading and unloading cars of freight."

Hi-Flex Spring on Motor Truck Is Recommended by Walmer Storage Co. for Long Distance Moving.

**G**EORGE SEBOLD, vice-president of the Weimar Storage Co., Inc., Elizabeth, N. J., suggests that a new type of motor truck spring suspension—known as the Hi-Flex spring—is worthy of the warehouseman's consideration.

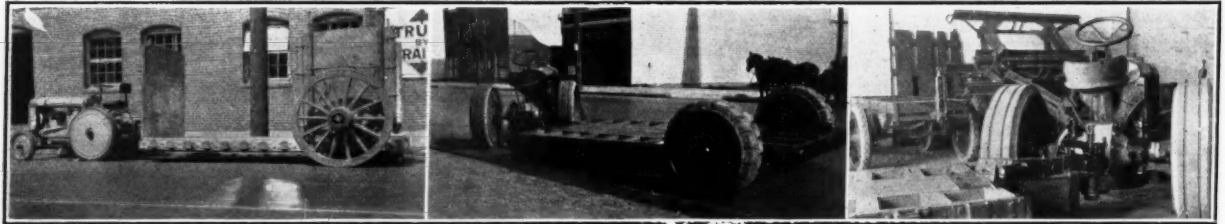
"Recently we installed two White bus chassis, model 50A, for long distance moving of household goods," Mr. Sebold states. "On the front of these units we are using pneumatic tires, but on the rear we changed the regular installation of pneumatic tires to the semi-pneumatic type and added with it a new type of spring suspension known as the Hi-Flex spring.

"The Hi-Flex spring outfit consists of a set of coil springs which come between the end of the rear springs and frame and help to maintain an even keel of the van body no matter what the pitch of the road may be. Also it takes up the jarring and sharp blows which the frame and body of the truck is subjected to when going over roads where surfaces are rough.

"These trucks operate at a maximum of 22 miles an hour and average about 18 on a long distance run. We also get increased mileage per gallon of gasoline, the increase averaging from 1½ to 2 miles a gallon over the old equipment which we used prior to the new installation.

"Besides the saving which is effected on labor by the increased speed of the unit itself, we feel that the truck chassis as now built by the truck manufacturers





*In San Francisco warehousemen and draymen have been converting horse-drawn drays into trailers, three of which are illustrated above. At the extreme right is shown the method of coupling trailer with tractor*

fills a very much needed want in long distance moving, as we can safely combine speed and service to our customers without injuring the unit itself because of such speed, and also saving the furniture of the customer from undue stresses and strains which later result in the loosening up of the furniture where it is glued or dove-tailed together.

"We will be glad to furnish to any member of the warehousing or moving organizations throughout the country further data on the Hi-Flex spring suspension if they so desire."

**How Low Bed Trailers and Tractors Are Displacing Horse-Drawn Drays in San Francisco.**

**E**VERY traveler who has ever passed through San Francisco is familiar with the low-bed horse-drawn dray. Designed in Liverpool for work around docks, the low-bed dray was transplanted to San Francisco and there developed. Its efficiency increased as the height of the loading platform decreased, until the present height of 16 to 18 inches was reached.

Some time ago the local warehousing and drayage concerns began to convert their low-bed horse-drawn drays to the Fordson drive. All that was necessary was the unhooking of the front wheels and then the installing, on the front of the low bed, an attachment for coupling onto the Fordson. A number of concerns have also had special low-bed trailers built which are towed by Fordsons, as shown in the photograph published below. This equipment is oper-

ated by the Carley & Hamilton Draying Co. and has a capacity for handling 15 tons. The equipment was hauling 10 tons of sugar the day the picture was taken.

A tractor and trailer such as this one can be operated for a total cost of \$12.35 a day, including depreciation and cost of insurance. The Carley & Hamilton Company operates three of these outfits. King & Co. operates five Fordsons and seven low-bed trailers. The wheels on the trailer shown in the Carley & Hamilton illustration are equipped with 40 x 14 inch tires and have a 102 inch tread. This low-bed trailer was built by the Modern Vehicle Co., San Francisco.

A loading edge, sufficiently low to permit the use of the ramp and hand truck in loading or unloading sacked or boxed commodities, spells economy of operation. The trailer is equipped with stakes at the end and sides, enabling it to be loaded or unloaded from both sides or from the rear.

In the first view above is a low-bed trailer which was converted by the Reliance Trailer & Truck Co., San Francisco, from a low-bed horse-drawn dray for the Prescott Drayage Co., San Francisco. In the reconditioning of this horse-drawn dray all the wheels were removed and new axle stubs were welded onto the old rear axle. Timken bearings were installed, with Reliance double disk steel wheels and 36 x 10 inch Kelly Kats rubber tires. The front wheels and axles were entirely removed and the front of the low bed was equipped with a Reliance semi-trailer attachment for

hooking up with the Reliance tractor attachment for Fordson tractor.

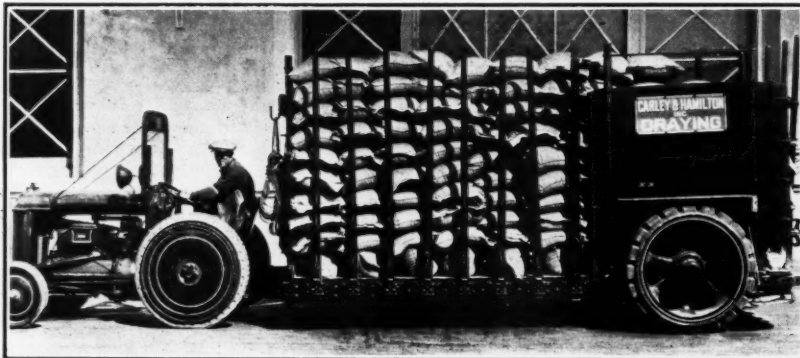
One view above shows a close-up of these attachments. Seated in vertical cylinders on the bearing and submerged in oil are coil springs working against "eye" bolts. To the "eye" bolts is pivoted a U-shaped yoke passing under the rear axle of the tractor. On the end of the yoke is a swivel member with a long, horizontal bearing that receives a stub on the trailer. The stub is held in position by a heavy "dog" collar. The advantages of these attachments are:

1. Short turning radius.
2. Absolute control of the trailer at all times and under all conditions, because it is pulled and supported through the same member and is positively locked to the tractor.
3. Carrying the weight on the tractor, 6½ inches forward of the rear axle, distributing about 10 per cent of it on the front wheels, precluding the possibility of the front wheels raising off the ground.
4. Carrying the weight on the tractor on coil springs, submerged in oil, affording a maximum protection to the tractor bearings; the springs also act as equalizers, relieving the tractor and trailer from torsional strains.

A feature of the low-bed trailer is the caster jack—a small wheel that disappears between the main frame member when in the traveling position, allowing the trailer, when disconnected from the tractor, to be moved by hand. A jack is incorporated in this construction to raise or lower the stub so as to facilitate coupling and uncoupling.

These tractor-trailer units can be pulled, backed and manipulated as efficiently as any other motor vehicle.

—Charles W. Geiger.



*Here is a low bed trailer built by the Modern Vehicle Co., San Francisco, for the Carley & Hamilton Co. This vehicle is operated at a total cost of \$12.35 a day, including depreciation and insurance*

**Weicker Labor System Is Designed to Minimize Lost Motion and Idle Time.**

**W**HEN speaking of labor saving methods in the warehouse and transfer business, one may mention mechanical devices, which reduce the manpower required for a certain task, and methods of handling men, which save on labor costs by preventing idle time. The Weicker Transfer & Storage Co., Denver, Colo., not only has adopted many labor saving devices of mechanical nature but has instituted a system of handling its workers so that there is very little lost motion or idle time for those on the payroll. This is not to be

construed that the company drives its men too hard or that they are expected to do more than they are paid for every day they are on the payroll.

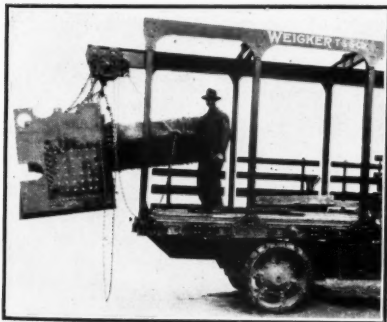
History has shown that when a national emergency arises in any country, representative forms of government must give way, temporarily, at least, to a dictatorship if the crisis is to be met forcefully. When emergencies of certain types arise in business, the power to govern the entire organization must be given to one man.

Probably there is no industry where emergencies arise as often as they do in the transfer and warehousing business because of the great fluctuations of demands for service. Failure to have sufficient men and equipment to handle a sudden demand for service is almost as costly as keeping too many men on the payroll when business is dull. The customers demand service—and failure to give service when demanded means a loss of profits.

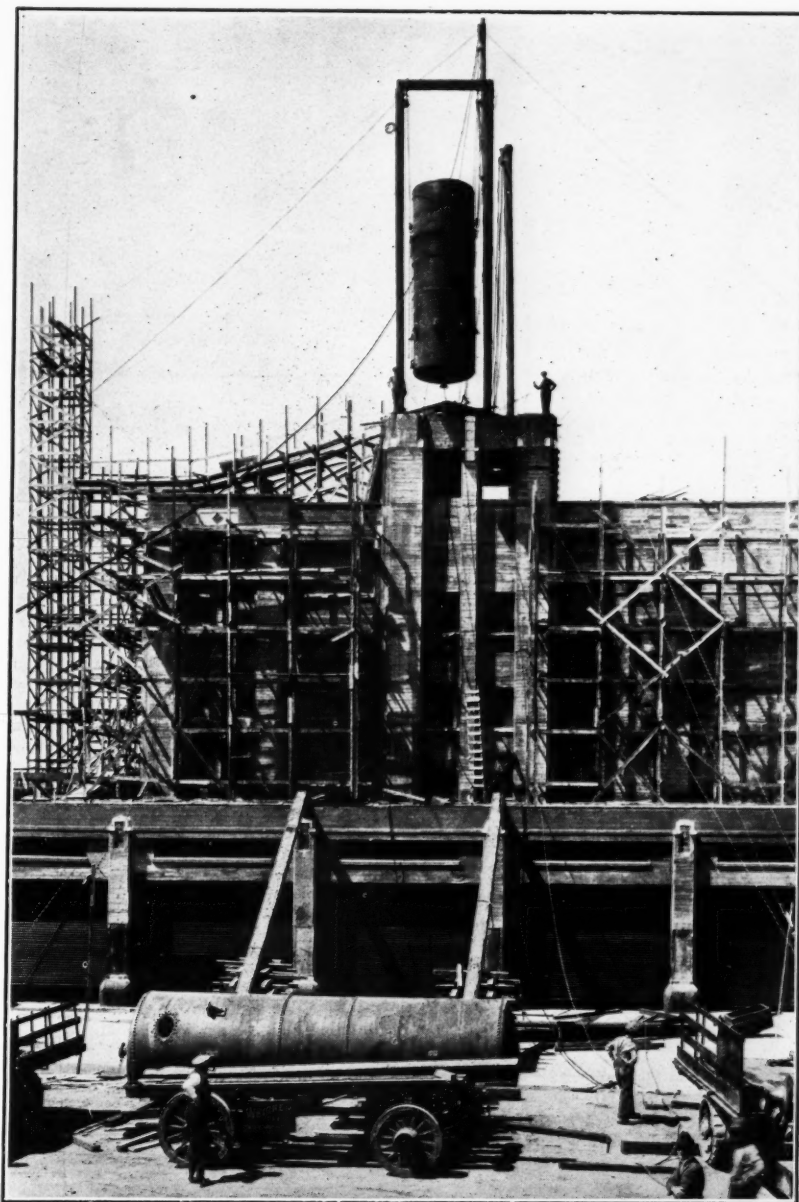
Hence the Weicker methods of handling emergencies, utilizing all of the man-power, distribution of the labor, etc., may rightfully be termed "labor saving methods." The basis of it all is a "dictatorship" if none will object to so strong a term. For one man has complete control of the movements of 30 trucks, 6 teams and scores of men—the superintendent, A. E. Gallagher.

This company, according to R. V. Weicker, president, pays higher wages for this type of work than any other firm in Denver, but the men earn their wages by doing more work than the average type of men in the transfer work do. There are no "specialists" on the payroll if by the term "specialist" we mean men who are trained to do only one class of work.

A truck driver cannot expect to stay on the payroll long if he insists upon driving a truck only; he must be willing to shift boxes in the warehouse, unload cars of freight, etc. Every man who goes to work for this company must understand that the superintendent has



Here is a Weicker truck which is equipped with an overhead traveling crane that enables two men to accomplish more in an hour than a dozen men could do without such a contraption. The upper portion of this framework may be removed and the truck converted into an ordinary vehicle. The truck will accommodate an article 6 feet square and weighing 12,000 pounds



Employees of the Weicker Transfer & Storage Co., Denver, raising and placing huge water tanks on top of a packing plant. Two trucks equipped with power winches are supplying the power

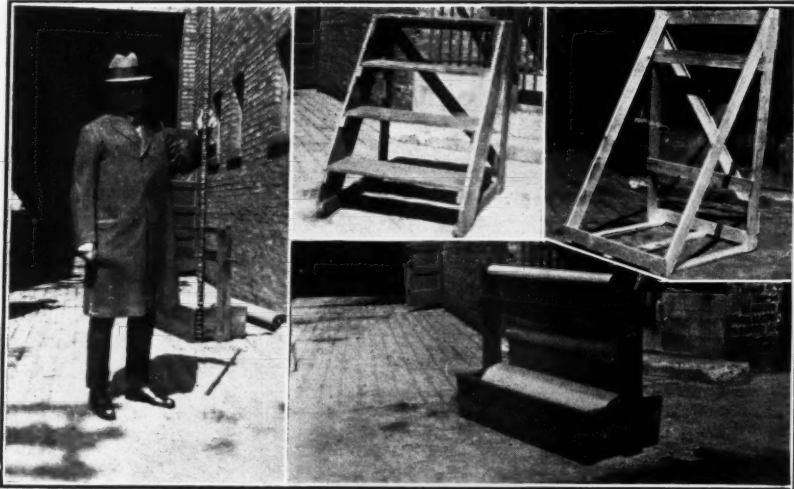
a right to shift him to other work if an emergency arises.

Of course there are some men who do one class of work better than they can do others, but the organization is so constructed that if there is a shortage of men in one department and an abundance of men in another, a shift can be made and the slack taken up. As examples:

In the warehouse department there are some men who are somewhat skillful in packing and if a call for help comes from the packing department these men may be switched. In the garage there are mechanics who can handle trucks and, in case there is need

for an extra driver on the trucks, one can be shifted to a driver's job. In every department there are men who can do other classes of work, and by following the policy of placing a superintendent over the entire labor force it is possible to shift men at any time without causing friction. The superintendent is responsible for the movement of the trucks and the complete utilization of all of the company's man-power.

The use of a "dispatcher" in governing the movement of trucks and the disposition of the working forces is not new in the warehouse field, nor is the constant use of a dispatcher's time record new, but whether other transfer



Four Jackson ideas—measuring stick, stairs, davenport rack and paper reel  
—described on opposite page

and warehouse companies make as great use of this system as does the Weicker company, considering its size, is problematical.

Not only is Mr. Gallagher the superintendent, but he is dispatcher as well. Just as the chief dispatcher of a railroad company sits before a telephone and a long yellow sheet with vertical and horizontal lines drawn across it, constantly making various and sundry "hieroglyphics" thereon to indicate the position and progress of trains over his division, with autocratic powers to summon train crews, engineers and equipment for additional trains, so does the superintendent sit before a long yellow sheet with an ever-sharpened pencil in his hand, a telephone close by, to route the trucks, shift the workers from place to place, record the time of departure and the hour of return, with such accurateness that the payroll could be made up from that sheet and the cost of any job computed therefrom, in case there was a destruction of other records or should a discussion as to the accuracy of other methods of computing arise.

On this sheet is recorded each worker's name and number, the time he reported for work, when he departed on a certain task, together with the record of that task as indicated by the ticket number; when he reported back to the office—and every man reports at once to the office for additional instructions—and so carefully is the day's activities mapped out and continually "programmed" that no man waits more than a couple of minutes before the desk of the dispatcher ere he receives his next orders.

Such a system, no doubt, is used by many of the very large warehouses and transfer companies, but it is doubtful that any one man has greater power over so many classes of work and types of workers. The superintendent has an assistant, and one or the other of them works from morning until night, the assistant is one of those men

who is trained to do any class of work and if there is a shortage of truck drivers, a need for help in the warehouse, or any other job needing a man, he jumps into action.

This system means a great saving of time and money and might well be adopted by other transfer companies who at present feel they are too small for such a plan—small enough to keep all of these details in "the head."

So much for that. Next in labor saving, by utilizing all of the man-power, is the prevention of the movement of trucks with less than a load.

The Weicker company does the transfer work for numerous manufacturing and distributing firms in Denver. Each day these firms have shipments to be made by freight in all directions from Denver, and the sizes of these shipments vary. One firm may have one box to go south, another may have a dozen consigned to a half dozen railroads; the next day the situation may be reversed.

It is a loss of man-power to permit a truck driver to collect shipments from several firms and take them to a half dozen freight depots for shipment. So, all such material is brought to the warehouse at the last possible moment, where it is sorted and then at the "eleventh hour" it is reloaded onto trucks, each truck taking the goods assigned to one depot. The freight depots close at 4 o'clock. Zero hour for the receipt of goods at the warehouse is 3:30. By five or ten minutes to 4 the trucks pull out for the depots. All day long the trucks are picking up boxes, crates, shipments of all sorts, from the clients and bringing them to the warehouse, where one platform is set aside as a freight room and the goods assorted as to depot destination.

Think how much time this system saves by preventing the various drivers dilly-dallying back and forth from store, factory or warehouse with shipments to five or six different railroads. The day closes with a bang, as it were, when

the shipments go to the railroads. Then there is almost superhuman speed shown in loading the trucks at the last minute. Dozens of men are summoned from the warehouse, if need be, to help load those trucks. Eight men loaded 5000 pounds of small shipments by hand onto one truck in less than ten minutes.

#### Labor Saving Devices

As to labor saving devices and equipment, Weicker company considers it has everything that has proved practical and necessary to accomplish almost any task of moving in this region. Engineering feats extraordinary are accomplished, but all the equipment in the world, every labor saving device known, would not accomplish the task if the spirit of doing were lacking in the men. The management of this firm apparently instills into the men the desire to accomplish that which others might call impossible.

In the warehouse are heavy duty elevators, jack lift trucks and platforms, and many other widely used devices to speed up the work and enable one man to do more. But it is in the transfer department, probably, that the more spectacular equipment may be found.

As mentioned previously, the company operates thirty trucks. These are of various sizes and are equipped in various ways to handle any type of material.

There are 4-wheel trailers, which may be used to handle an overflow of household goods and enable 2 men to handle more than a van load of goods at one time.

Then there are trucks equipped with power winches to pull heavy materials onto the truck and let it down.

There are trailers constructed to handle heavier goods than household furniture—one is an enormous affair with a low platform and capable of carrying a weight up to 50 tons and of huge dimensions.

And there is one 2-wheel trailer that the company constructed to use in moving long and heavy steel beams. This has a swinging bolster and an adjustable tongue which, when pulled out to the limit and hooked to the truck, will accommodate a beam 35 feet long; but when not attached to the truck and placed far to the rear, where it is fastened to the beam being carried with one chain to hold the tongue up and another chain hooked to the truck, will accommodate a beam 80 feet long.

Another labor saving device is a truck equipped with an overhead crane which enables 2 men to load a heavy article 6 feet square as to dimensions and weighing 6 tons. As may be seen in an accompanying photograph, the crane is so placed that it may pick up the heavy object from the ground, place it on the truck, and later unload it to the ground just where it is wanted. The truck is so constructed that, by removing a few bolts in each of the eight upright beams, the upper half of the crane support and frame may be removed and the truck is converted into an ordinary transfer ve-



hicle, thus making the truck a two-purpose machine.

While the Weicker company has scores of labor saving devices in the tool house, the shops, the warehouse, etc., combinations of these devices as worked out by skilled workmen and foremen enable them to handle some jobs which ordinarily would require special equipment. Seldom are two of these heavy jobs, involving engineering problems, the same, and adaptation of equipment for the needs of each individual job is not a mechanical formula altogether, for willingness to tackle any sort of a job and enthusiasm in its accomplishment, are vital factors.

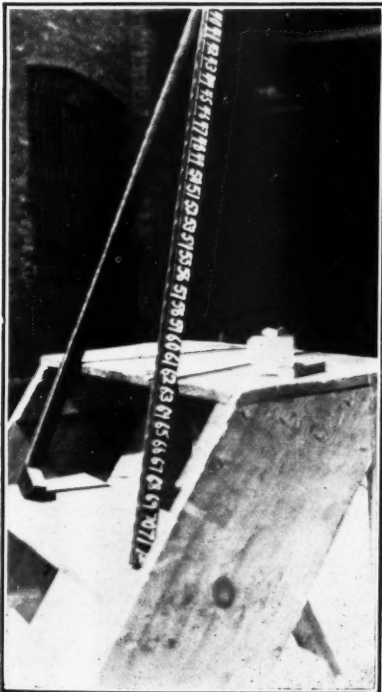
Thus the policy of employing good men, paying them wages commensurate, keeping them busy and making them like it, recognizing that wages should be considered in the light of first costs (you can't afford to work cheap men or cheap equipment), interesting those men in the accomplishment of quick and efficient work—this policy should be considered a labor saving method.

—Willis H. Parker.

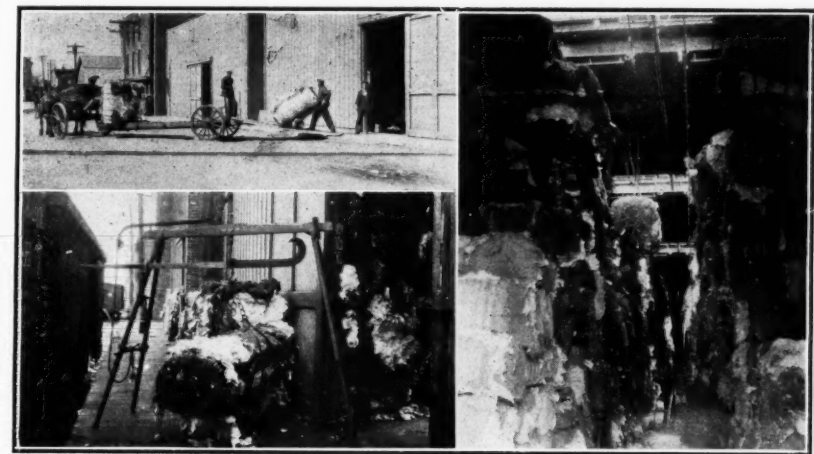
Paper Reel, Measuring Stick, Stairs and a Davenport Rack Are Some Jackson Company Ideas.

HERE are four little ideas contributed by T. A. Jackson, president of the Jackson Van & Storage Co., Chicago, based on his long experience and present operations in household goods warehousing:

1. Paper reel. This reel, illustrated herewith, was made by one of the Jack-



Measuring stick used by Jackson Van & Storage Co., Chicago, for getting furniture dimensions in customers' homes



Cotton handling at plants of Fox Point Warehouses, Inc., Providence, R. I. Right—Bales are hoisted to desired height and then transferred to a trolley and run into place to be stored; here, a bale is just being transferred from whip hoist. Lower left—Bales are weighed as soon as removed from cars, the scales being moved to most convenient spot. Upper left—Loading cotton from warehouse; in addition to motor trucks, this type of horse-drawn vehicle is used for teaming, a portable platform being utilized when trucks are loaded

son company packers. With the aid of this are fashioned small rolls of paper, in convenient sizes, for the men to take with them on jobs performed away from the warehouse. Forty-three turns of the reel provides  $12\frac{1}{2}$  yards of paper, the work being done by the men during their spare time.

2. Measuring stick. This device, illustrated herewith, is used for getting dimensions of furniture at the customer's home. The packing room men then cut up lumber with a power saw at the warehouse and make the crates of necessary sizes. Frequently this labor is performed during the mens' spare time and the crates are all ready for the day when the packing is to be done. "It's surprising," Mr. Jackson comments, "how easy it is to cut the lumber to fit the article that is to be crated, and invariably the crates fit just like a glove."

3. Stairs. These are used in Jackson warehouses for piling purposes where the lots are stored perhaps 8 or 10 feet high. (See accompanying illustrations.)

4. Davenport rack. This has previously been described and illustrated in *Distribution and Warehousing* and is alluded to in Clarence A. Aspinwall's "Household Goods Warehousing in the United States" which *Distribution and Warehousing* is publishing serially, but it deserves further mention here and is again illustrated. These racks, designed for the protection of upholstered davenports in storage, are made, at slight expense, in the Jackson company's packing department at night, and they eliminate a great deal of damage.

How Machinery Handles Cotton at Plants of Fox Point Warehouses in Providence, R. I.

THE Fox Point Warehouses, Inc., has a storage plant in East Providence, R. I., that was designed for warehousing cotton and handling the bales with

the greatest possible economy. This building has five sections, each 53 by 110 feet. The sections are separated by brick fire walls and there is only one floor to the building. The roof is from 20 to 24 feet above the floor, the variation in height being due to its slope.

A spur track runs alongside a platform on the railroad side of the warehouse and this platform is at the level of the freight car floors and also at a level with the warehouse floor. Each section has a center door which opens onto this platform and on the street side there is a corresponding door. There is no fixed platform on the street side but a movable platform with a ramp attached which leads down to the level of the warehouse floor is used. The incline of the ramp is such that a man can easily run a hand truck containing a bale of cotton up it and the platform itself is level with the bodies of the trucks used. This platform with its ramp is moved from one section to another as the delivery of the cotton by truck demands.

The loaded cars are spotted in front of the doors of the sections in which the loads are to be stored. A movable cotton bale weighing scale is placed at the most convenient spot and the bales are weighed as they are trucked out of the car.

The bales are then dropped back onto the hand truck and trucked through the doorway of the warehouse. From this point it is handled by power-driven equipment.

Over each door on the street side of the warehouse there is a five-horsepower Stevens Adamson whip hoist. The hoisting rope from this hoist runs through a tackle block. This tackle block can be attached to any one of 72 heavy strap iron hooks fastened to the roof girders. Each hook is at the end of a trolley track running from the fire wall to the hook. There are 32 of these





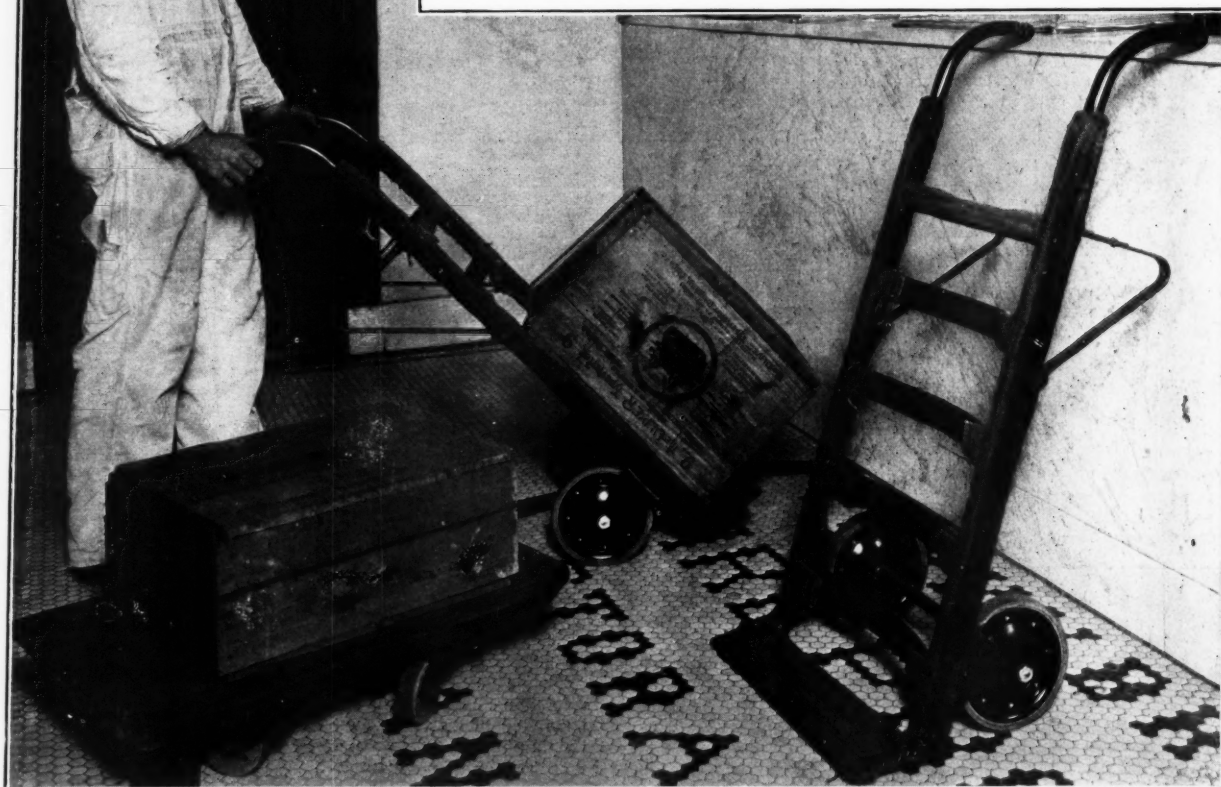
Perky Company, Kansas City, Uses Rubber-Tired Dolleys and Trucks to Avoid Marring.

THE better the class of trade, the more it is appealed to by furniture storage executives, with assurances that furniture will not be scratched in moving. The past few years have seen a marked improvement in the quality of furniture in offices; and the offices are much more highly finished, as to polished floors and woodwork, than in the old days. When the owner plans to

How Premier Portable Partition Facilitates Storage of Household Goods in Los Angeles

RODNEY S. SPRIGG, manager of the Premier Fireproof Storage Co., Los Angeles-Hollywood, here gives to the industry detailed information, illustrated with photographs, regarding the Premier portable partition, of aid in piling goods in furniture storage warehouses. Mr. Spriggs has been granted a patent on this invention.

"We are using," he writes, "a new



Rubber-tired dolleys and trucks used by Perky Bros. Transfer & Storage Co., Kansas City. To prevent scratching or marring of office furniture or floors, the truck frame is padded

tracks on either side of the alley-way left open when the cotton bales are stacked. All five of the sections of the warehouse are arranged in exactly this manner.

The arrangement results in lower building cost, greater ease in getting at the cotton, and more expeditious moving of it. However, it has required very careful planning of the building. The girders have to be spaced at the exact distance required to have the trolley tracks over a row of bales. The posts supporting the roof have to be set within a fraction of an inch of the points indicated by figuring on the size of the bales.

The trolleys that run on the overhead tracks are moved from track to track as the stacking requires. The equipment is simple but very effective in operation.

—J. E. Bullard.

move, he thinks of those polished surfaces of furniture and floor.

But it is one thing to promise to save the surfaces and another to avoid damage. And it is still a third thing to be able to explain convincingly to the business man why a promise of no scratches can be honestly made!

The Perky Bros. Transfer & Storage Co., Kansas City, secures many a moving job in offices through telling of its padded trucks and rubber-tired dollies.

The hand trucks have been padded by the employees so that desks resting on them need not be either scratched or dented by slipping or jar. These hand trucks have rubber-tired wheels, to protect the floors.

Dollies used in the same service are swiveled, with ball bearings, and the wheels are rubber-tired.

—Ben S. Brown.

idea that is working out most satisfactorily in the storage of household goods.

"About two and a half years ago the idea occurred to me that there should be some way of making a portable partition which would be rigid as long as you wanted it and at the same time one that could be readily removed and transported to some other portion of the warehouse in case it was more desirable to use it for the construction of compartments in some other location.

"Also, in building, I did not want to spend a lot of money on private rooms, having that money tied up in small sections when we could use large spaces for the storage of automobiles and other bulky objects. And the third consideration was the type of panel that would not readily mar or scratch highly polished furniture.

"After considerable experimenting a

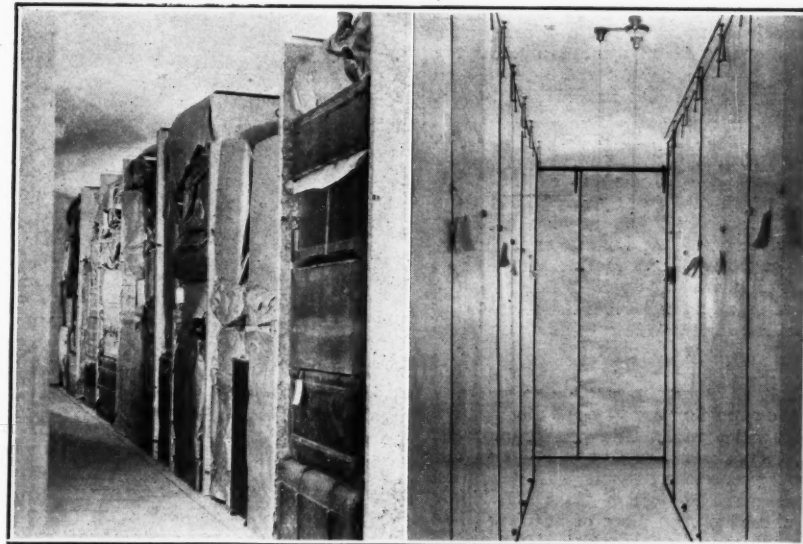
metal panel 33 inches wide and 9 feet 3 inches long was evolved. The panel is wedged against the ceiling by a special bracket holding an ordinary 10-inch bolt. The panel is set squarely on the floor and, through the use of a long Ford wrench, the pressure by the bolt against the ceiling is sufficient to hold the panel in position so that it is impossible to knock it down as long as the wedge remains fast.

"Also, in order to have the panels line up and make a perfect aisle, L-shaped brackets were made to fasten on the side of the panel, being fastened together with  $\frac{1}{4}$ -inch by 1-inch bolts.

"The original idea has had several changes, but the fundamental principle still remains and, as indicated in the illustrations, we now have a partition which is quite portable throughout the warehouse, which is absolutely rigid in itself and thus gives the customer at a minimum cost all the benefits of a private compartment.

"The panels are made on a wood frame covered with metal, so that they are fireproof in themselves, and while the Board of Fire Underwriters here has not yet passed on them for insurance credit, I am informed by members of that department that they will allow some credit for the use of these panels, once the warehouse is completely equipped with them.

"The members of the fire department and inspectors from the Fire Prevention Bureau are enthusiastic in their praise and state that while they are probably not an absolutely fireproof proposition, owing to the fact that there is a certain amount of space — usually one inch—left at the top of the panel



*Showing section of household goods space divided by patented partitions of Premier Fireproof Storage Co., Los Angeles-Hollywood. Left—Here the fronts have not been put in place. These piles could not stand alone but would have to be supported from the sides in order to keep goods upright and in position. Panels permit goods to be stored in narrow and deep piles. Right—Showing a completed section. The tags indicate the individual lots that are behind them*

between the ceiling and the panel, they are unquestionably a tremendous fire preventer, as it is practically impossible for fire to spread rapidly through a warehouse using panels of this sort, but it would be more of a creeping fire which could be readily handled by any modern fire department.

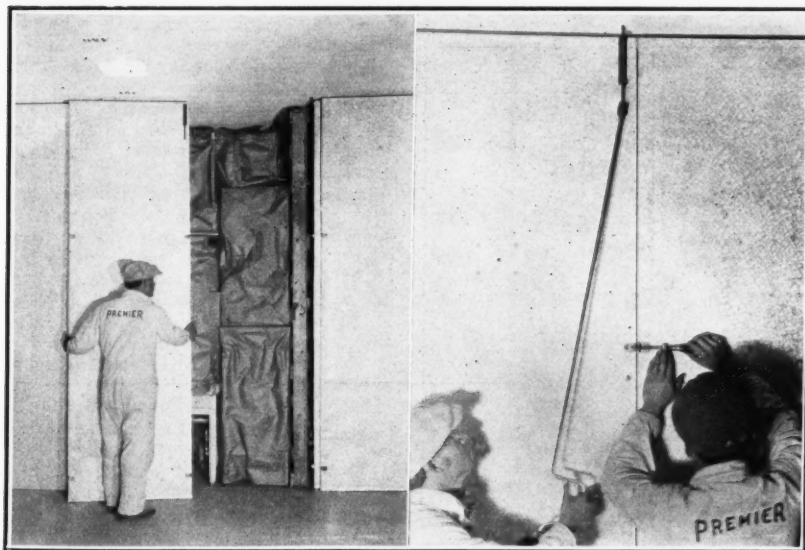
"The removal of the panels from the front for purposes of access is a matter of half a minute for a man with a screw driver and one of the wrenches which is kept on each floor, and we find no inconvenience whatsoever in the matter of taking a panel section out for the purpose of access.

"In the matter of piling goods we find that the panels are everything that could be desired, for we start right at the back of the pile and load the goods just as they are loaded in a van, leaving any extra space in the front of the pile so that it can be used at future date in case the customer may so desire.

"Also, as a matter of experience, we find that we are getting considerably more goods into a given space with the use of the partitions, for I believe any warehouseman will agree with me that goods coming into the warehouse in a 700-foot van cannot be put in 700 cubic feet in the warehouse. They invariably take up more space owing to the fact that each pile must stand separately and independently. The partition eliminates this condition.

"For example, on a pile 10 feet deep we have a definite plan of saving about 16 2-3 feet to each pile with the use of the partition. If the warehouseman will check through the warehouse he will find that it is necessary to allow about 4 inches between piles of goods in open storage, for it is not possible to pile household goods so that the lines are absolutely true.

"Also there has been at various times some controversy with particularly critical customers in the actual measurement of a pile, they wanting to hold you down to the last half-inch. Under the system



*Left—Premier patented portable partition being put into place to inclose goods completely. Each section weighs about 45 pounds and offers no difficulty for one man to handle. Right—Picture taken to show facility in demonstrating. In setting up the panels the lugs with the screw driver here shown are fastened together first. The wrench is placed over the head of the bolt, and the tightening of the bolt in the bracket, against the ceiling, presses the panel firmly against the floor, with the result that it is absolutely immovable until the bracket is unscrewed*

of the partition we use on an inch and three-quarters instead of a 4-inch width, but allowing a full 2 inches against the panel and 4 inches for the regular open section, we find that in a pile of 10 feet we save a little more than 16 feet. Take out your pencil and figure it up and you will find it a fact.

"The one other feature of the partition which particularly appeals to us is the fact that it has practically eliminated scratches and mars on furniture in the warehouse. Heretofore a great deal of our damage was caused by goods striking adjoining goods in piles or by touching the walls in case of a pile being alongside a wall or in a private room. The metal panels are absolutely smooth and it is almost impossible to put any mar on the furniture by rubbing against the panel section. The surface is almost as smooth as glass, and in order to test it out you can take a piece of galvanized iron or use a piece of glass and rub it on the edge of a piece of furniture and see whether any mark is left, and I think you will agree with me that if a piece of furniture is wrapped it will be impossible to leave any mark whatsoever on the furniture by placing it in contact with a smooth surface of this nature."

How Heavy Commodities Are Handled at  
Warehouses of Central Storage Co., Kansas  
City

AN entire floor in one of the warehouses of the Central Storage Co., Kansas City, Mo., is equipped with traveling monorail hoists. There are four bays in this building and each has its hoist equipment, built in specially.

In this room heavy road grading machinery is handled, together with sim-

ilar commodities. With the hoists any spot on the floor can be reached by direct power. The machines in three of the bays are 1-ton hoists; the fourth is a  $\frac{1}{2}$ -ton.

The installation consists of an I-beam track on the ceiling. From this an I-beam trolley depends. The trolley, or traveler, is just long enough to reach the sides of the bay. An important feature of the mechanism is that it is self-aligning; it slides back and forth sufficiently on the bearings that support it from the track—that is, the bearings slide in the

trolley—so that one end of the traveler may run considerably ahead of the other end. This gives remarkable flexibility and ease of handling. The hoist also travels on the trolley.

An accompanying picture shows road grading machinery being piled with the aid of a traveling hoist. All parts of one machine are assembled in a pile, to facilitate shipping; and then all parts of a second machine are piled on the tops of the first lot. Without the chain hoist this double use of space would be impossible. The small parts are laid in place, in the pile to which they belong, by hand.

The Central company initiated some years ago a special service on storage and distribution of heavy pipe. The pipe was stored in an open yard adjoining the main warehouse. This service has grown to such proportions that additional handling equipment has been installed, until every foot of the area can now be touched by the two cranes now in use.

An electric crane is located within reaching distance of its 38-foot arm of the track that sets a car at the dock extending beyond the end of the building.

The traveling hoist, led to the end of the arm, picks a load off the car; and then either deposits it at its storage spot in the yard or places it on a waiting motor truck. The pipe can be piled to considerable heights and can be handled as easily as light objects are disposed of by hand.

An auxiliary piece of equipment is a stiff-leg derrick, located in the opposite corner of the yard. Quick-moving storage is piled by the electric crane within its own reach. Slow-moving storage is deposited by the crane within reach of the derrick arm, which lifts and deposits it in distant locations. The opposite course is taken on shipments—the derrick picking up goods ordered out and



*This platform lift truck used by Central Storage Co., Kansas City, deposits and picks up quick-moving storage, eliminating 2 handlings. It is especially useful in pool car work*



*Each of the four bays in the Central Storage Co.'s machinery warehouse is equipped with a traveling trolley for economical piling of road grading machinery*



depositing it either on waiting trucks or within reach of the crane.

The handling devices come in usefully on much other heavy material which is not to be stored in the yard. A car may be set on this track, from which items are lifted by the crane, and set on warehouse trucks to be taken into the warehouse; or deposited on motor trucks driven into the yard within range.

One of the platform lift trucks used by the Central company is shown, in an accompanying picture, handling case goods. A large number of the platforms are available. These are particularly used for goods that will move in a very short time.

A stock of platforms may be taken to a car, set out, and loaded from the goods in the car. One platform lift truck picks up a loaded platform, transports it to the storage space, drops it—and goes back for another loaded platform.

When goods are to be moved out, one platform lift truck can handle the job to the waiting motor truck or car without the help of any loaders.

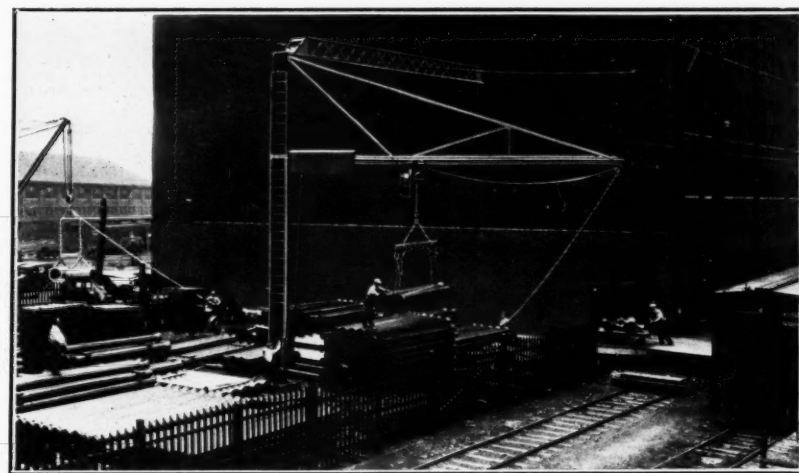
The unloading of the truck at the pile, and its reloading when goods are ordered out, are two items of economy, from the standpoint of warehouse costs.

The platform lift truck is especially and most largely used on pool car handling.

—Ben S. Brown.

Lyon Co., Los Angeles, Has Special Racks for Storage of Overstuffed Chairs and Davenport

**T**HE Lyon Fireproof Storage Co., Los Angeles, has devised a davenport rack as illustrated herewith. It will be recalled that several years ago *Distribution and Warehousing* described and illustrated a davenport crate originated at the warehouses of the Jackson Storage & Van Co., Chicago, and this crate is referred to in Clarence A. Aspinwall's "Household Goods Warehousing in the



Cranes and derricks enable the Central Storage Co. to use every foot of a 125-by-88-foot yard for storing and handling pipe and for handling other heavy commodities

United States," now being published serially in *Distribution and Warehousing*. The Jackson crate was illustrated in the May issue as part of Chapter VII—"Receiving and Stowing"—of the Aspinwall book. (See also page 14 herewith.)

When Judson M. Davis, president of the Lyon company in Los Angeles, saw the Jackson rack he immediately instructed his packers to copy it, and it was used in the Lyon plant until, as Mr. Judson explains, "our packing foreman thought he might go Tom one better"—and the result is the rack illustrated herewith.

The Lyon davenport rack holds six davenports, according to Mr. Davis, and takes up about the room of two davenports if they were set on the floor. These racks are set in rows in the middle of the room.

The other photograph shows special

racks, built at the Lyon warehouse, for holding chairs. These racks are placed along the wall.

"This arrangement keeps the furniture in nice condition and we believe it is going to be appreciated by our customers," Mr. Davis says.

These racks and contents are kept in a special room for overstuffed furniture. This room is kept so thoroughly impregnated with an odor distasteful to moths that Mr. Davis is of the opinion that the Lyon company has solved the particular problem arising out of the generally accepted fact that the moth is as fond of overstuffed furniture as it is of Oriental rugs, thereby making it requisite that the warehousemen give special attention to providing protection of such furniture.

Monarch Co., Kansas City, Has Double Deck System of Storing Small Lots of Household Goods

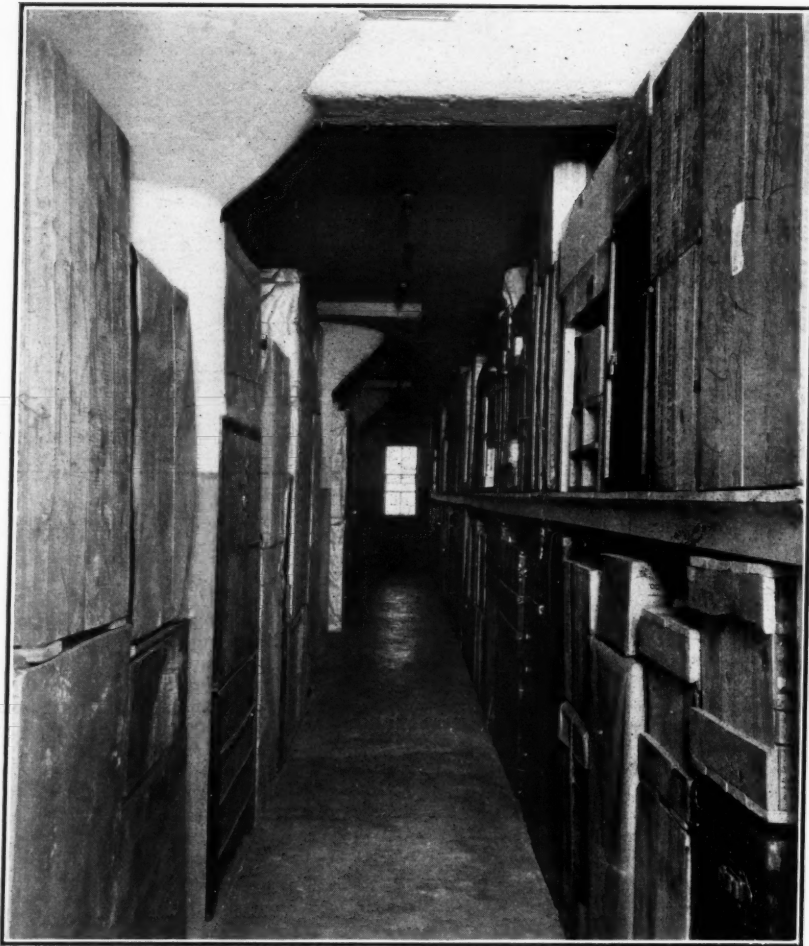
**T**HE Monarch Transfer & Storage Co., Kansas City, Mo., has double-decked parts of seven floors in its two household goods storage warehouses. The decks are 5½ ft. high, giving the same altitude on each deck. The arrangement was devised for the handling of small lots of furniture, whereby the customer's interests are particularly conserved as he is not paying for vacant space above his small lot—and as no other merchandise is piled on top of his.

The warehouseman thus, also, has the opportunity to use all his space, vertically, without inconvenience or waste time in extracting small lots. Much time is saved in storing, as the upper pile is handled almost as easily as the ground floor pile. The ordinary type of ladder, used in piling, is employed in second-deck storing, with the added advantage that cases or pieces, lifted to the edge of the deck, are firmly supported there and can then be shoved back into place—without danger of damage to items



Chair racks and davenport racks devised by the Lyon Fireproof Storage Co., Los Angeles





*Double-deck arrangement for storing small lots of furniture on parts of seven floors of warehouse of Monarch Transfer & Storage Co., Kansas City*

resting on the floor, and with obviously greater ease than when the objects have to be supported by hand in such piling.

The insurance rate is not affected by the decking; in fact, the hazard is reduced compared with that under conditions of equal height of goods without the decks.

The accompanying picture shows one of the Monarch company's aisles—one side with goods in larger lots piled from the ground; the other having the double deck and piled with small lots.

Daniel P. Dray, president of the company, comments that the savings and convenience are obvious and that the arrangement is extremely satisfactory.

—Ben S. Brown.

**"Fireproof Sandwich Door" Used by Fidelity Co., St. Paul, to Protect Household Goods**

**T**HE following description of a cheap and easily constructed "fireproof sandwich door" is contributed by C. C. Stetson, president of the Fidelity Storage & Transfer Co., St. Paul, Minn.:

"This door, for private rooms, can be made by any packer or mechanic handy

with ordinary tools during odd times at the warehouse.

"We have made with our own men a considerable number of private rooms out of 3-inch hollow gypsum tiles and fitted them with sandwich doors, made by our men, at what we judge less than one-half the expense they would have cost constructed at a shop.

"Briefly, these doors are made of two thicknesses, one one-inch lumber nailed together, one layer being placed diagonally (as this gives strength and avoids sagging) and covered with a sheet of this No. 24 galvanized iron on each side. One sheet can be made about the size of the door, but the other should be 6 to 8 inches larger each way, so as to allow being bent over and nailed down on the inside of the door. This presents a smooth appearance on the outside and fairly smooth inside.

"If the widest galvanized sheet (48 inches by 96 inches) is used for the outer cover, the door can be made amply large for any household piece.

"We prefer to use two long strap hinges, and a frame of 4-inch by 4-inch pine pieces, and paint all the woodwork

gray, leaving the doors with a bright zinc color and the hinges black. We use a snap latch about the center of the height of the door, which has a hole for padlock; but thus far we have not had to padlock the doors.

"The writer has insisted upon a slight rounding of the edges of the door core and of the frame, so that the extreme angles of the metal are curved and the tendency to chip off frame lessened.

"We realize these doors are not strictly standard fireproof and would not be labeled by the Underwriters, but they would probably hold back a fire and they look right to the customer."

**Portable Elevator and Caterpillar Crane Used by Price-Bass Co. of Nashville, Tenn.**

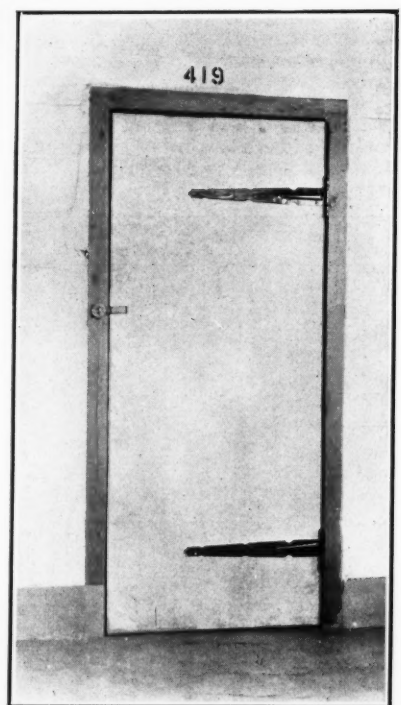
**T**HE motor-driven portable elevator herewith illustrated is used by the Price-Bass Co., Nashville, Tenn., warehousemen, to stack tobacco in hogsheads, newsprint in paper rolls, and practically any other commodity which is to be piled higher than 5 or 6 ft.

This machine was built, of special design on the Nashville company's order, by the Barrett-Craven Co., Chicago.

"We find it to be quite a labor and time saver," to quote J. O. Price. "You might be interested to know that the lifting capacity of this stacker is 3000 pounds, and in handling tobacco it is quite frequent that we furnish it with its capacity in loading."

#### *Caterpillar Crane*

The Price-Bass company also uses a Byers caterpillar crane (herewith illus-



*"Fireproof sandwich door" devised by Fidelity Storage & Transfer Co., St. Paul*

trated) with a lifting capacity of 5000 pounds. On several occasions, Mr. Price states, the machine has been given a load considerably over that capacity. The crane is found successful in handling machinery, bulk materials of all kinds, and gas and water mains.

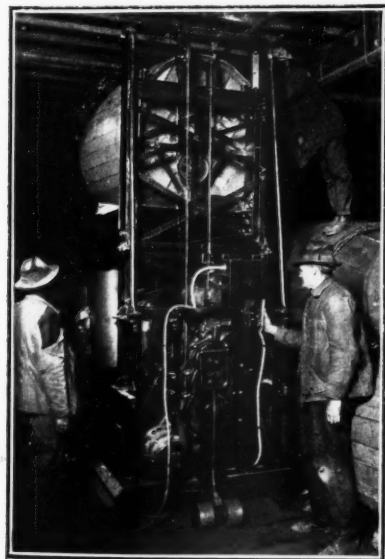
Special Dolly and Truck Used by Jones Co., Providence, to Handle Pianos

AT the Jones Warehouses, Inc., Providence, R. I., the handling of pianos has been made easier by the use of special equipment. One piece of this equipment, a dolly, is made by the company.

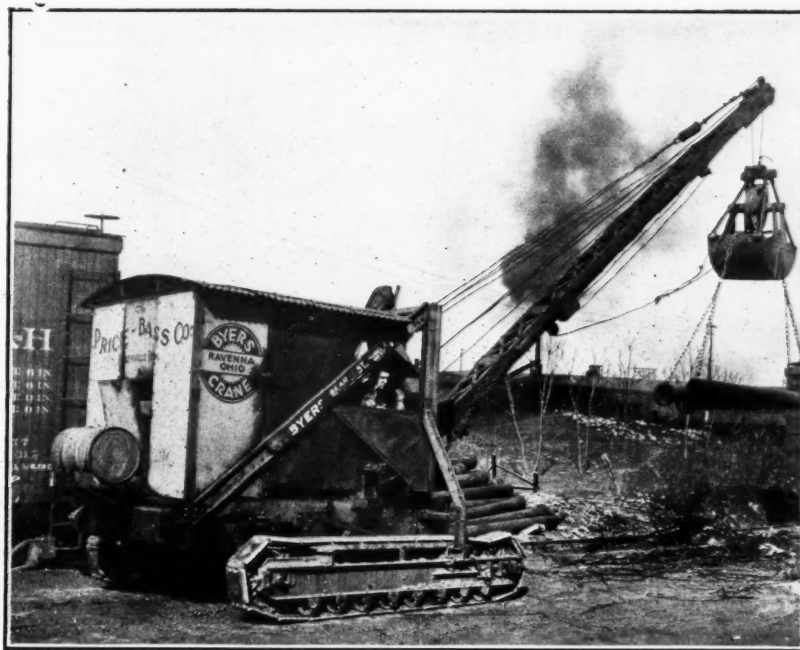
It was found that making the dolly higher than those in common use resulted in easier handling of pianos. The one being used in Providence has single-wheel, two-and-a-half-inch casters with wheels with pressed felt. These do not mar any floor and they roll easily. These are attached to the transverse pieces of the dolly, and on top of these transverse pieces the longitudinal pieces are attached, making the dolly about 8 inches high and 18 inches long. By having the longitudinal members up against the bottom of the piano or piano box it is much easier to move the instrument over obstructions such as curbs and the like. Having the piano a few inches higher than the standard dolly raises it, also makes it easier to handle.

Another feature of piano handling which the Jones company has found satisfactory is the truck used. This is a ton-and-a-half truck with a body which does not overhang the wheels and therefore is narrower than the usual body. It is a low-slung truck equipped with oversize pneumatic tires, the size used being 36 by 6 inches, and the body has a long tail gate.

If the front of the house is close to the sidewalk line this truck can be



Price-Bass Co., Nashville, uses this motor-driven portable elevator to stack goods piled higher than 5 or 6 feet



Caterpillar crane used by Price-Bass Co., Nashville, Tenn., for handling bulk materials of all kinds

backed up over the sidewalk, the tail gate lowered over the steps, and the piano rolled right into the truck with no lifting. As a matter of fact wherever it is possible to back up to the front door, lifting of the piano is done away with. It is just a case of backing up, letting down the tail gate and rolling in the piano.

#### Large Pneumatics Used

The extra large pneumatic tires have a cushioning effect which prevents any damaging of curbs. The tires just conform to the shape of the curb and lift the truck up or let it down with the minimum of jar and with no damage to anything. These large tires also make it practical to back up driveways or walks which might be damaged with solid or even cushioned tires.

The combination of this truck and dolly has facilitated the handling of pianos to a marked degree. They can be moved much more quickly and with considerably less labor.

—J. E. Bullard.

Outdoor Canopy a Useful Device Installed by Premier Company of Los Angeles-Hollywood

A METAL canopy which serves a dual purpose has been installed by the Premier Fireproof Storage Co., Los Angeles-Hollywood. It extends the full width of the building—as shown in the accompanying illustration—being 135 feet long and having a depth of 34 feet. The iron bands are bracketed into the wall and hung on 1-inch bars anchored into the third floor slab.

"In the first place," writes Rodney

S. Sprigg, manager of the Premier company, "it gives us complete protection in all weather against possible damage to the furniture from the elements, and in addition serves as a garage at night, the trucks simply being backed into the platform, where they are amply sheltered."

"The little office pictured is the superintendent's office and is located so that he has a complete view of everything that may take place in or about the yard. Also all trucks are routed from here."

Patented Storage Container Cuts Down Crating and Packing for Driver Co., Berkeley, Cal.

AN invention recently patented by John R. Driver and M. B. Driver of the Driver Storage Co., Berkeley, Cal., eliminates crating, much of the packing, some of the labor and not a little of the argument between customer and operator in the furniture warehousing business.

The invention covers the construction of storage containers, either metal or wood, of sizes ranging from safety deposit boxes to 8 by 8 by 5 feet, or even larger, up to the limit dimensions which can be handled on castors and on a motor truck.

The plan of the Driver brothers is to test these containers in a six-months' trial, keeping close and accurate accounts of costs along all lines, to determine their acceptability by the public, and the expense of building and using them, to the household goods warehousemen.

The smaller containers are intended for the storage of valuables, such as silver, jewelry, valuable papers, pieces of



*Metal canopy which Premier Fireproof Storage Co., Los Angeles-Hollywood, installed to give weather protection of furniture and to serve as a garage at night*

statuary, and so on. The large sizes are for the storage of furniture of any kind or size.

The plan is to build these large containers of wood, each equipped with several pivot castors, and with steel rods running through the corners from bottom to top, there terminating in rings, by which the containers can be handled onto and off trucks. The containers are so constructed that they can be handled in the flat when empty and erected in a few minutes in the home of the customer. There the person storing goods of any kind or size may pack them into the container himself, or have them packed by the employees of the warehouse.

When the container is filled and while it is in the home of the customer, the latter locks it, with a padlock furnished by the warehouseman, or with his own lock, and retains the only key. The warehouseman thus has no means of opening the container once the owner of the packed goods has locked it. If the customer prefers, he will be supplied with a numbered seal, instead of a lock, and this seal he himself may apply to the container.

The container is then loaded on the truck, taken to the warehouse, wheeled into place, and left until the owner calls for it.

On occasions of inspection or partial withdrawal of goods by the customer, he signs a filed statement covering the date of the inspection or withdrawal, and there the warehouseman's responsibility ceases, as he has no means of ingress to the container.

The invention amounts to a portable storage room to which only the owner of the stored goods has access. It is claimed to have many advantages over the present method of storing furniture

and other household goods. It makes for much greater accuracy in estimates in the home of the prospective customer; it eliminates checking in or out of household goods by the piece; it removes all possibility of piece-theft, breaking of packages or other loss between the residence of the owner and the warehouse; it very materially reduces the cost of handling into and out of the warehouse, as the storage container is rolled from the truck onto the elevator, run up to the floor on which it is to remain, rolled on its own castors to its place, and that is the end of the handling in; while the same process, reversed, constitutes the complete labor of handling out.

It reduces the responsibility of the warehouseman and eliminates opportunity for argument between honest but mistaken customers and the warehouseman, as nothing can be removed from the container unless the owner removes it with the knowledge of the warehouseman. It minimizes to a great extent the possibility of trickery by dishonest persons who have stored their goods and it lowers the chances of theft. It cuts down the cost of bookkeeping and the maintenance of warehouse records by a considerable sum, and it saves time for packers, truck operators, warehouse workers and the office staff. The uses of the smaller containers are obvious.

Several of the containers of large size are being constructed in the shop of the Driver Storage Co. and will be sent out for immediate service. The charge to the customer will be slightly higher than the present charge for storage, but this will be largely compensated for by the considerable reduction in the handling in and handling out charges, which, heretofore, have together amounted virtually to the cost of a

month's storage. The acceptance of the new method amounts to the giving to every customer of a private room for the storage of his or her goods.

An interesting feature, according to figures prepared by J. R. Driver, is the saving in space to the warehouseman and the ease of keeping space accounts. It becomes apparent that, if this method be widely accepted, the result will be considerable changes in the methods of construction of furniture storage warehouses, especially with regard to height of ceilings and floor dimensions. In place of the present 40 per cent waste of space, estimated, the space can be made to conform probably within less than 10 per cent differential to the number of these containers which can be stored on each floor. This should make the construction of an adequate, modern, furniture warehouse much easier for both the warehouseman and the architect.

Work of handling the container from the home to the truck, or into the van, will be no greater or more difficult than that of handling a large grand piano over the same route; and, by the way, these containers can be constructed to hold pianos, davenport, or any other furniture desired.

The actual cost of construction of one of these storage containers is not much greater than that of properly crating the furniture that container will hold.

#### **To Market the Container**

The invention is held to be particularly applicable to long-distance hauling and shipping by motor truck or by train. It is purposed, later, to rent or sell these containers to owners of household goods who wish to make long-distance shipments and who patronize the company owned and operated by the inventors.

As has been said, the containers are so constructed that they can be shipped, or hauled, to the place of packing, in the flat, and there erected in a very few moments. Likewise they may be shipped back in the flat, occupying little space, after a long-distance shipment of furniture has been delivered and unpacked.

While the invention partakes somewhat of the lift-van idea, yet it takes the lift-van directly into the warehouse and stores it and its contents indefinitely.

—H. H. Dunn.

#### **Space Above Pianos Utilized by Weimar Co. for Upholstered Suites on Platforms**

**H**AVING had considerable trouble in the storing of upholstered suites when placed in vault or room with the rest of a customer's furniture, the Weimar Storage Co., Inc., Elizabeth, N. J., conceived the idea of utilizing the space above the pianos in the piano room.

"With this thought in mind," to quote George Sebold, the company's vice-president, "we built platforms of steel consisting of supports of one-quarter-inch flooring, all of metal, about six feet above the floor. In other words, high enough to put pianos underneath.

"On these platforms we are now stor-



ing our unholstered suites, charging the customer from \$2.50 to \$3 a month for the service so rendered.

"This not only produces a revenue for the warehouse but is a very satisfactory selling feature, and when once explained to a customer, creates additional good will for the warehouse, inasmuch as the customer sees and feels that special thought is given for such type of furniture, which needs special care.

"Also it releases the equivalent amount of space in the vault so that whereas 700 cu. ft. may be necessary to take care of a certain amount of goods with the upholstered suite out, a smaller vault can be used.

"We have found it very profitable and it has been quite a business getter for our organization."

Several Novelties to Feature New Depository  
of Lincoln Company in New York

**I**N the fourteen-story household goods warehouse which the Lincoln Safe Deposit Co., New York, is planning to erect at Third Avenue and 70th Street several novel features are contemplated, according to Walter C. Reid, vice-president and general manager.

"We will have," Mr. Reid states, "two large freight elevators—large enough to take up a loaded van—and at the floor landings there will be a depression in the floor, large enough to roll the van off and leave it until we are ready to unload it. This will leave the floor of the van about on a level with the floor proper of the warehouse section, so that a van 11 feet high can be readily unloaded on a floor 9½ feet high from floor to ceiling.

"Parking space in New York is so limited that we are arranging for a private parking space at the rear of our building so that our safe deposit patrons can drive right in at our rear door, without it being necessary for them to cross the front sidewalk. This assures absolute privacy for wealthy patrons, at the same time being a private parking space for their cars. There will be a device so arranged that when a car crosses the sidewalk it causes the gates to open, and when the car enters it will pass onto a platform and the weight of the car causes the gates to close again.

"We are also arranging for a room for our packers and chauffeurs which they may use for a lunch room and smoke if they so desire."

Simple But Effective Device Is Run Board  
Used With Trucks of Perky Bros.

**T**HE run board is one of those simple devices becoming more and more used. The sort that seems so simple it is a wonder nobody thought of it before!

About 30 inches wide and 16 feet long, the run board is provided with hooks for engagement with metal edging of end-gate, and is extended from truck to top of terrace.

Over the board the men may walk with their loads, direct from the bed of the truck to the house. Or it may be



Run board used by the Perky Bros. Transfer & Storage Co., Kansas City, to reduce time and physical strain. Left—Stowing the board under a truck. Right—Chair and piano passing down the board

placed, as in an accompanying picture, as a ramp from ground to truck, and the men can carry or roll the load on it.

The runboard saves lifting loads down from or up to the truck bed, as well as saving the arduous lifting up the steps from the sidewalk.

The board is slipped into a bed provided under the larger trucks, where rollers facilitate its stowing away.

The Perky Bros. Transfer & Storage Co., Kansas City, finds the run board an invaluable aid, especially in moving pianos. While the use of the board does not reduce the number of men on a job, it certainly reduces their labor and time.

—Ben S. Brown.

#### 6 Conveyors—2 Chutes

**DIETRICH & WILTZ, Inc.**, New Orleans warehousemen handling big volumes of grain, particularly in sacks, find four Hotchkiss conveyors and two chutes ample for its needs. The conveyors are driven by 18-horsepower Otto gas engines and can handle 600 sacks of grain to the hour, either lifting or lowering. The conveyors are equipped with automatic discharges which unload at the desired points.

—R. A. Sullivan.

Here Are Some Good Ideas from the Star  
Van & Storage Co. in Lincoln, Neb.

**S**EVERAL interesting ideas emanate from the operation of the business of the Star Van & Storage Co., and accompanying photographs illustrate three of these.

On the top floor of one of the Star company's warehouses are located special fireproof compartments not unlike standard equipment in all such plants. These compartments are provided, however, with a feature well worth considering. Each door has a strip of strap

iron ¼-inch thick by 2 inches wide, and as long as the width of the door itself. This is held at the bottom by bolts run through slots instead of round holes. It is virtually impossible to produce a tight-fitting door, but this strap iron fits tightly against the floor, no matter how irregular the floor's surface, and very decisively keeps out all rats and mice. Incidentally it prevents also any possibility of fire gaining entrance beneath the door.

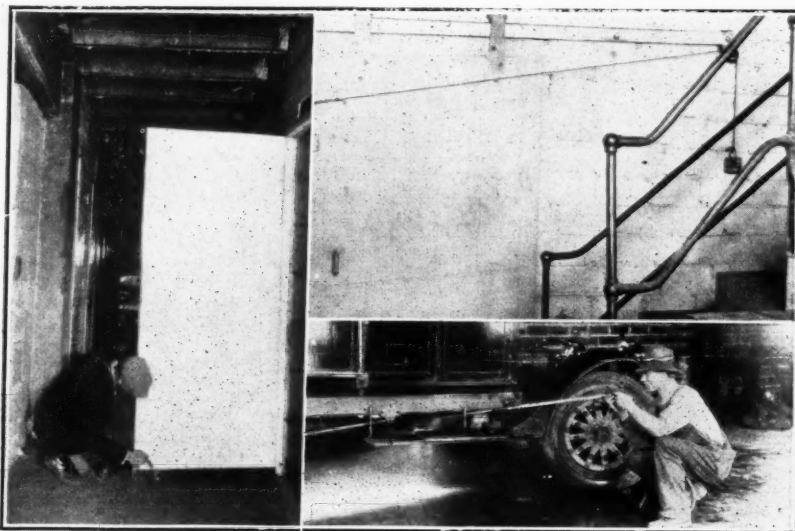
Several sliding doors are used which are out of the ordinary in design. Instead of having the track run horizontally, it slopes toward one end. The door slides up the track to open and is attached to a counter-balance weight which very nearly offsets the weight of the door. The advantage of the sliding door with the track set at a slight angle is evident: at no time will the door touch the floor except when tightly closed. In other words, the door, to close, slides not only toward the left side of the opening but also toward the floor, so that it will insure a tight fit at the floor and left hand side, as indicated in the illustration herewith.

The Lincoln company operates its own general garage and repair shop, for both its own trucks and for some outside jobs, the latter increasing the company's profits materially. An accompanying photograph illustrates one of the garage ideas—a pipe used along part of a hose length to enable the user to wash the hard-to-get-at places under a truck.

Harry E. Smith, in charge of the shop, is often called out to repair a truck which has developed some trouble. He obtains all the information he can over the telephone; then with his little grip in hand he sallies forth, and it is seldom he does not have, in this grip, all the parts necessary to effect repair.

The Star company's crating and packing department is in charge of a man





At warehouse of Star Van & Storage Co., Lincoln, Neb. Left—Strap iron at foot of fireproof compartment door insures tight fits, keeps out rodents and prevents fire gaining entrance. Upper right—Another door, sliding type, also assures snug fit. Lower right—Harry E. Smith, garage foreman, using pipe on hose to wash hard-to-get-at places under motor truck

who is somewhat of a genius and every now and then devises a method which saves not only time but materials as well. Recently he discovered that by making a certain crate 3 inches wider he could pack a bedroom dresser with a mirror inside—rather than boxing and crating the mirror separately. This has two distinct advantages, effecting saving in time and space.

J. H. Loper, president of the Star company, appreciates the value of advertising and has worked out some original ideas along this line. One is the sending out of cards to customers whose goods have just been moved. The cards courteously ask the customer to mail a reply cardboard to the company's offices as soon as the job has been completed and to specify "Yes" or "No" to the question "Barring ordinary wear and tear, were your goods hauled to your satisfaction?"

Another little stunt which has helped build business is the sending out of "Removal Cards." Six cards are sent with the driver on the final load to the mistress of the house. She is asked to mail these to friends. The cards state that the customer has removed and gives the new address. It states also that a Star van has just left the door. These cards, only being received by the customer's friends, give not only the new address but announce that the Star company has been the medium through which the change of address was made possible.

Another Star profit-making idea is having on hand a stock of folding chairs and tables which are rented out at a nominal fee. The plain chairs rent for 8 cents for the first day, and mahogany chairs for 10 cents, and the tables at 25 cents. After the first day the rate is one-half the initial amount.

As a part of its regular service the

company supplies customers, on each moving job, with free baskets for small articles—a small thing, perhaps, but a service which the customer remembers.

—R. O. Parks.

#### Bekins Co., Los Angeles, Installs Special Fumigation Service to Attract Customers

**T**HE Bekins Van & Storage Co., Los Angeles, recently added to its equipment a special fumigating service which promises to prove quite profitable for both patrons and the Bekins firm in ridding fine furniture of moths.

The fumigating chamber is furnished by the Ply Metal Co., Chicago, and is 6 by 8 by 10 feet in size. The walls are made of laminated wood, to prevent warping and are lined both inside and out with sheet steel. The cost is about \$1,000.

Practically the entire front end is composed of two large doors, rendering possible the admission of extra large pieces of furniture. The chamber is hermetically sealed with lever locks and cannot be opened without a key, which safeguards both goods and operators.

The fumigating chemicals used are sulphuric acid and cyanide. Two quarts of the former is placed in a jar, which is set on the floor of the chamber. After the goods have been placed inside the chamber and the doors closed, one pound of cyanide is added by being lowered with a string through an opening in the top of the chamber, which afterwards is sealed air-tight.

After the goods have for twenty-four hours been subjected to the poisonous fumes generated by the chemicals, the gas is withdrawn by means of a pump operated by a small electric motor, placed on the floor of the outer room,

near the wall. A 3-inch pipe carries the fumes through a window into the outside air. It requires fifteen minutes to empty the chamber of gas.

Fumigation rates have not yet been standardized, as the work still is in the experimental stage so far as charges are concerned. A base rate for a three-piece set of overstuffed furniture has been established at \$20.

Sometimes when the work of moths on a rug or piece of furniture is noticed the owner thinks it is unnecessary to treat any other of his belongings until his attention is called to the fact that these troublesome insects, or their eggs, more than likely are present also in the rest of his goods and it is impressed upon him that the only safe course is to have the entire lot fumigated.

The treating of furniture in the process of manufacture with Larvex, new patent compound, will render fumigation unnecessary, if experience proves the claims made for this invention. Meanwhile, fumigating with sulphuric acid and cyanide is the surest method of ridding goods of moths.

One advantage of operating a moth fumigator is the enlarging of a storage company's list of customers, who thus become acquainted with the concern's facilities and business methods, with the result that many at some future time use other kinds of service offered by the company.

—O. H. Barnhill.

#### 4-Wheeled 10-Ton Trailer Aids Movement of Goods by Haslett Co., San Francisco

**A** COMMON disadvantage of trailers and tractors when used in place of heavy duty trucks is the difficulty of moving the trailer, perhaps only a few feet this way or that way, to facilitate loading or unloading, after, the tractor has been detached and dispatched with either a "loaded" or "empty," as the case may be.

The Haslett Warehouse Co., San Francisco, has overcome the drawback to the tractor-trailer unit as a method of hauling from wharf to warehouse by use of a specially designed 4-wheeled 10-ton trailer equipped with roller bearings.



Special trailer used by Haslett Warehouse Co., San Francisco

These trailers have a standard 15-in. bed and are of all-steel automobile construction. Having 4 wheels mounted on roller bearings, it is comparatively easy

to push them around, as the needs of loading or unloading require, by hand. At the wharves it is often possible to get them into positions in which it would be very difficult to maneuver an ordinary trailer.

The wheels of the trailers are equipped with solid rubber tires, and after four years of service these tires appear to be exactly as good as new. Indications are that they may be good for ten years more, and of course the trailers themselves should last indefinitely. They cost \$950 apiece.

The standard Fordson tractor which we employ to haul them, equipped with special heavy wheels to supply the required traction, costs us about \$1000.

Thus the cost of a unit of one tractor and three trailers is about \$3850, and such a unit can do the work of about two ordinary 10-ton trucks.

—C. F. Cormack, general superintendent Haslett Warehouse Co., San Francisco.

"Silent" Telephone and Typewriter Are Features in Office of the Perky Bros., Kansas City

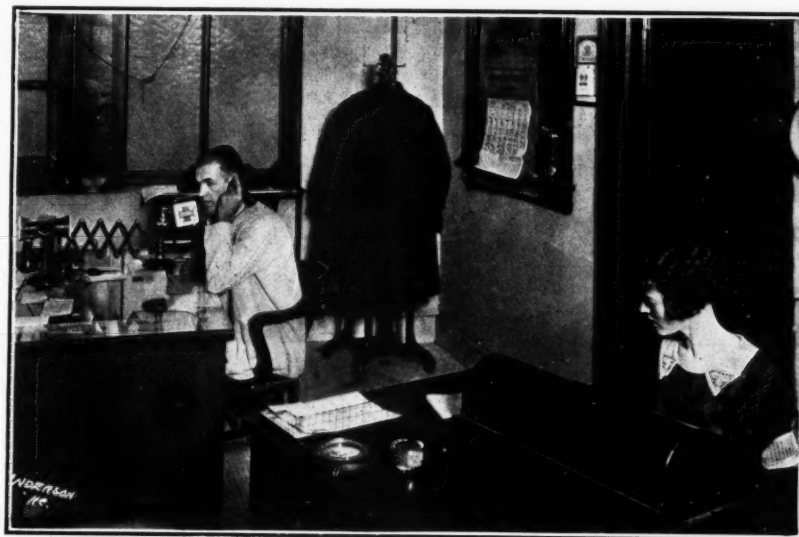
TWO types of "silencers" add materially to the efficiency, accuracy and comfort of office activities—and curtail annoyance to persons on the other end of the 'phone—in the business of the Perky Bros. Transfer & Storage Co., Kansas City, Mo.

Mufflers on telephone instruments are fairly well known. Two 'phones are on the one desk, in this office. Both can be used at the same time without disturbance of either operator by the other. Not only does the reduced volume from the voice of the speaker remove the possible annoyance or confusion of others at the desk, but the office is so much quieter, hour after hour, that more work can be done in it, and planned in it, than where one or more 'phones are constantly busy with more or less loud talking. Each salesman or executive talking into a 'phone is thus almost as private as in a separate office. And customers outside, talking in, naturally hear only the one voice speaking directly to them.

Observe the loud voices shot into some 'phones (the loudness may not be necessary, but it seems psychologically inevitable) when another conversation is going on in the same room, and you will catch the value of these silencers.

The typewriter silencer is a newer device. In this instance, the box constituting the muffler is attached covering the typewriting machine. It has a glass front window so that the operator can watch the keys and the paper. She shifts without lifting the case. The young woman who operates this machine is also the switchboard operator. The switchboard is located in the outer office of the Perky company. Here are the chief reasons for using the typewriter silencer:

First, and most important, the switchboard operator can go ahead with her writing while lines are plugged in, without danger of the rattle of the machine



Quietness in the office of the Perky Bros. Transfer & Storage Co., Kansas City. Two "silencers"—telephone at left and typewriter at right

intruding into any telephone conversation.

Second, the noise of the typewriter, in an office with other desks, does not reach any other employees.

Third, the efficiency of the young woman, both as switchboard operator and as typist, is enhanced by the reduction of the noise from the machine.

Scientists are right now studying the deleterious effect of noises on efficiency. They have reached some conclusions, and have collected data, showing that certain kinds of noises, of certain volume or intensity or frequency, interrupt or retard operations. But practical experience gives a sufficient sanction for cutting down the noises as much as possible in an office. The people in the office do better work, keep their minds on immediate tasks more concentratedly, have less nerve strain, in proportion to reduction of noise—and more people, more desks, can be planned in an office room where noise has been so largely eliminated as is possible with such silencers.

—Ben S. Brown.

Spiral Conveyor Connects Floors of Currier-Lee Plant With Chicago's Tunnel System

THE Currier-Lee Warehouse Co. is one of Chicago's merchandise storage firms which is served by the city's tunnel system. Of the accompanying photographs, the one at the left shows tunnel cars being loaded at the Currier-Lee warehouse for outbound freight stations. The illustration at the right gives a view of the spiral conveyor which the company uses in loading goods on cars at the tunnel entrance.

The tunnel system serves all prominent jobbers and wholesale houses in Chicago's downtown section and connects them directly with the outbound freight stations.

The freight cars in the photograph at the left are each 4 by 12 feet in size,

with a carrying capacity of 6,000 pounds. Freight destined to railroads leaving Chicago is loaded into these cars and delivered direct to the freight stations.

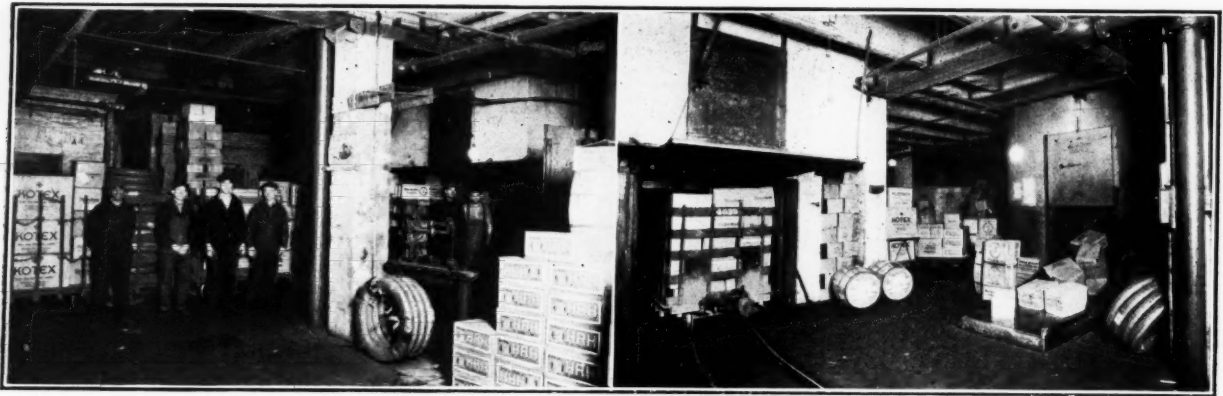
Bills of lading are prepared covering each shipment. The shipments are checked by a representative of the tunnel company and the original copy is signed at the warehouse so that it is immediately available to the customer. The shipping order and memorandum bills of lading are then placed in an envelope bearing the name and address of the railroad to which the goods are to be delivered. The envelope is placed under a clip at one end of the tunnel car. This serves as a switching card.

The tunnel company has about forty miles of trackage under the streets of Chicago. The tunnel bore is about 8 feet in diameter. Electric locomotives are used and as there is no street traffic to interfere, great speed is possible.

Very few Chicago visitors ever learn about this interesting transportation system operating about sixty feet below street level or appreciate the great volume which is handled in this manner. Over the lines are moved more than 5,000 3-ton loads daily. A large part of this is merchandise going to or from the jobbers, wholesale houses, large retail stores and freight stations—not forgetting the public warehouses. A very large tonnage of coal is handled to the large stores and office buildings, and cinders removed.

This unique transportation system, taken in connection with the merchandise package cars loaded out of the Chicago freight stations over the twenty-four steam roads entering the city gives the various public warehouse companies which connect with the tunnel an exceptional shipping service.

The system eliminates all necessity for cartage to freight depots and does away with congestion on shipping platforms and trucking docks. This of course



At a Currier-Lee warehouse in Chicago. Left—Chicago tunnel cars being loaded for outbound freight stations. Right—Spiral conveyor and entrance to tunnel system

relieves the teaming facilities greatly and overcomes a great deal of the complaint usually made against congestion at warehouse platforms.

The conveyor shown in the picture at the right is used almost exclusively in connection with the shipping of less than car lots via the tunnel system. Shipments are assembled on the upper floors of the Currier-Lee plant and are delivered direct to the side of the outgoing cars, where they can be easily and quickly loaded. This saves a congestion of warehouse trucks on the shipping floor, and also it reduces elevator expense.

Shipments are assembled according to railroad routing, and as fast as cars are made ready for loading, all shipments going to a given railroad are delivered to the platform for immediate loading to the tunnel cars.

Tractors and Trailer Transfer Commodities for Cole Company in Providence, R. I.

IN the transfer of goods the Cole Teaming Warehouse Co., Providence, R. I., has been extending the use of tractors and trailers. The first extensive use this company made of this system was when it undertook the transferring of freight from the incoming to the outgoing freight house of the New York, New Haven & Hartford Railroad. The tractors and trailers served their purpose so well in this work, held down the investment and reduced the labor to such a low fraction of what would have been necessary with trucks, that the company has adopted the same method for other transfer work.

For example, it delivers the merchandise for a chain store company from the warehouse of that company to its stores. One delivery a week has to be made to each store. During this past February some of the roads were impassable; the stores are located in outlying sections and many of them were hard to reach. Yet only two stores out of the 180 were missed during the worst week of the year. On some trips it required two tractors to a trailer but it was possible to open the roads and get through.

In this work the driving labor is re-

duced by about one-half. When unloading a boat and transferring the goods to the warehouse or to the consignees, two trailers can be used to one tractor. On the other hand, if the job is one where a truck is just as effective as a tractor and trailer, the tractor and trailer may be used in exactly the same manner a truck would be used.

The Cole company has found tractors and trailers not only economical in transferring goods from one point to another, but declares the equipment to be extremely flexible.

—J. E. Bullard.

"Each Installation of Conveying Equipment Has Paid for Itself Within a Year"

FIVE years ago Sussman, Wormser & Company moved its wholesale grocery business from San Francisco's older wholesale district to a cooperative terminal and warehouse building of modern concrete construction. The warehouse up to that time had been distinctive chiefly for the absence of anything approximating modern equipment. Goods were conveyed in and out by hand trucks and slow moving freight elevators, and shipments were made up on the sidewalk.

The warehouse now occupied was equipped at the start with two steel chutes of the spiral type. In four years two blades have been added to one of these chutes and one to the other, thus making a total of five separate chutes, distributed in two groups. In addition, power conveyors and gravity lines have been installed wherever such equipment could be made to replace hand trucking operations.

Probably a comparison between the company's present methods of handling outgoing shipments and those employed in the old warehouse would show an increase in efficiency of several hundred per cent. But much easier to present concretely, and especially convincing, are the economies which have been effected through the various improvements and additions which have been made to the installations that were already there when the company moved into its present quarters.

At the start one of the single-blade conveyors was used to carry goods to the country shipping room; the other to the city shipping department.

The first addition was the installation of another blade in the country shipping room conveyor. This serves to separate carload and less-carload country shipments from country shipments routed by motor truck.

A belt conveyor and gravity line at the mouth of the second blade carries the goods to be shipped by railroad to a point 100 ft. away from the place where the other blade discharges. Under some conditions this makes it possible for one man in the shipping room to attend to two separate shipments at the same time. And on other occasions, when shipments by rail and by truck are both heavy, two separate groups of handlers and clerks are enabled to work without getting in each other's way.

Later a third blade was added to this conveyor for the purpose of carrying goods to the export department on the second floor. And in the other one of the two original single-blade conveyors was added a blade which takes goods to a special city department on the first floor.

The blade installed for the export department, supplemented by power conveyors and gravity lines, saves the re-handling of goods five times. From the conveyor mouth goods for the export shipping room drop onto a gravity line which takes them to a gravity marking table. Here they are marked without any handling; and thence, by power conveyor, they are raised to another gravity line which transports them to a strapping machine. After the wire straps have been applied another gravity line takes them to the assembly floor of the export shipping department.

With the help of these various conveying systems it is possible to handle packages in the export department at the rate of ten a minute, which includes the marking of them and the application of two wire straps.

The total cost of the spiral and power conveying systems and gravity lines has been something like \$10,000. And there has been no installation which has not



paid for itself within a year from the time it was made.

One advantage of the gravity lines and power conveyors as a substitute for hand trucking is that they are up overhead and leave so much more floor space available for storage or assembling shipments.

In some cases with large carload shipments it has been found economical to extend gravity lines right into the freight car, thus dispensing with hand trucking altogether.

—Franklin S. Clark.

(Editorial note: While the foregoing text deals with operations in a private warehouse, it seems worthy of a place in this special material and handling and equipment issue.)

#### Hoists and Conveyors Cut Costs at Plants of Douglas Company in New Orleans

THE Douglas Public Service Corp., Inc., New Orleans merchandise warehousemen, recently began using a Mason whip hoist at its Appalachian unit. The hoist cost \$2,000 and was installed by a local mechanic who followed blue print instructions.

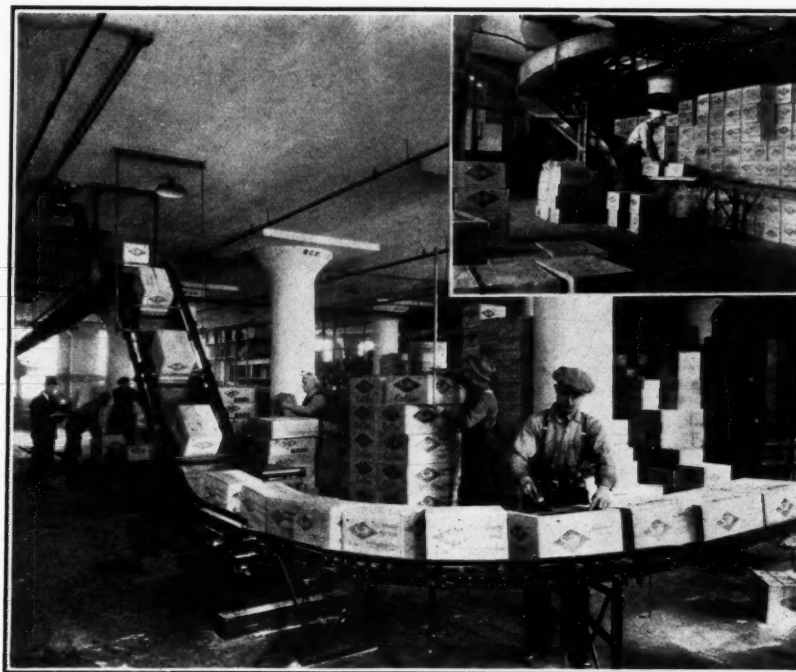
The hoist lifts from without the building, the cable being wound over a pulley on a fixed steel arm which extends from the ceiling of the third floor of the warehouse over the loading platform where freight cars are emptied and loaded. Material is taken into and from the second and third floors through sliding doors. The hoisting cable is wound over the arm-pulley by a windlass, electrically driven at a uniform speed by a specially constructed motor. One man operates the hoist, lowering or raising the cable with the simple turn of a lever.

Officers of the Douglas corporation expect the hoist to cut labor costs in certain cases of work by at least one-third. The hoist has a lifting power of 1,000 pounds for three-quarters of a second from the loading platform to the third floor, a distance of approximately 90 feet.

Particularly in the handling of burlap do the company's executives anticipate a big saving. Large quantities of burlap, in bales weighing 1,000 pounds each, are stored on the third floor. Previously all burlap was loaded on hand trucks, moved inside to the elevator, and thus lifted to the third floor and unloaded. Each operation required the labor of several men. The elevator is of the heavy type, capable of lifting automobiles, and its operation is costly.

With the hoist, one bale of burlap may be swung up at a time—requiring only a second's time for a job which formerly occupied several minutes and the services of several men. Just how many bales of burlap can thus be practically handled within one minute with the hoist's potential power to raise one bale every three-quarters of a second, remains to be determined.

Another bucket elevator or conveyor—for handling grain in sacks or flour in barrels, has been installed at the New Orleans company's Appalachian warehouse, at a cost of \$1,500, by Philip Rahm, a local milling engineer.



At wholesale grocery warehouse of Sussman, Wormser & Co., San Francisco. Upper right—A belt conveyor and gravity line carries goods to be shipped by railroad 100 feet from the place where they are assembled for shipment by motor truck. Lower—Cases for foreign shipment on the gravity marking table

This unit of machinery—the fourth conveyor in the Appalachian plant—is designed to eliminate the hitherto heavy cost of lifting and lowering grain and flour by elevator. The Douglas company handles huge volumes of flour and grain. The conveyor extends from the ground to the third floor. It is a double action machine—sacks of grain may be lifted while barrels of flour are being lowered, or vice versa. This conveyor handles approximately 600 sacks of grain an hour.

In chutes the Douglas corporation has hit upon what is perhaps a new idea. Hundreds of sacks of grain are moved daily on a wagon or motor truck to inter-city points. Chutes, as in most warehouses, run from upper floors to ground floor. Sacks of grain can be sent down them at the rate of approximately 700 an hour, at high speed. Once on the ground floor the sacks are laboriously loaded onto hand trucks and pushed to the loading platform, where one by one they are tossed onto waiting vehicles. This process is repeated until the wagon or truck is filled.

A chute at the Appalachian warehouse now extends from the upper floors to the first floor and then out directly over the vehicle. A workman at the second floor directs the grain down the chute to the wagon or truck, where one or two men do the arranging. A level surface of the chute shortly before the chute terminates at the loading point, checks the speed of the sacks.

This arrangement, it is believed by the Douglas company's executives, has

eliminated every unnecessary step, and it makes possible the loading of 700 sacks an hour providing the vehicles can be moved from and to the loading point as speedily as they are filled.

To handle bale goods after they have been transferred to the various floors the Douglas company uses at the Appalachian warehouse a portable lifting hoist manufactured by the Lakewood Engineering Co., Cleveland—called, by negro workmen "The Powerful Katrinka," after a comic strip character.

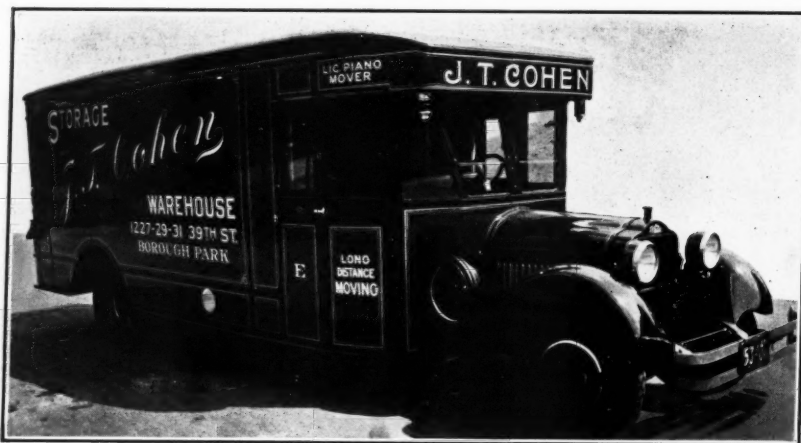
The hoist is operated by one man and power is supplied by 12 storage batteries, which are recharged daily. Its maximum lifting height is about 16 ft. It is self-propelled, short and makes the sharpest turns easily.

In loading burlapping, bales are lifted from the loading platform to the third floor by a whip hoist. A workman swings the bale onto the "Katrinka." Another workman seated on the rear of the "Katrinka" shifts a lever, lifts the bale, then shifts another lever and the little machine goes speeding off down an aisle between high rows of burlapping, makes a quick turn, leaves its cargo on top of another bale, starting another row, then turns back to the sliding door, where the whip hoist has another bale waiting.

All this takes only a fraction of a minute. Two men start the bale on its way from the loading platform 100 ft. below, outside the building, and in a few seconds it has been stored away far in the rear of the third floor.

—R. A. Sullivan.





Here is a de luxe moving van used in household goods warehousing. The Roeder body, 16 feet long, 7 feet wide and 6 feet high, is mounted on a Model A White bus chassis

Specially Built De Luxe Van on Bus Chassis  
Moves Furniture for Brooklyn Warehouseman

A DE LUXE moving van bus was recently introduced in the household goods warehousing business of J. T. Cohen in the Borough Park section of Brooklyn. The body is mounted on a Model A White bus chassis and is the product of the Fred. Roeder Manufacturing Co., body builders, at 1400 Atlantic Avenue, Brooklyn. This unusually handsome van is illustrated herewith.

The length of the body is 16 ft., the width 7 ft. and the height 6 ft., all inside dimensions. The entire body is constructed of bone dry, seasoned, white oak. The panels are non-splitable. The roof is of cross bows, the tongue and groove basswood ceiling being covered with heavy canvas covered with waterproof paint.

The body is designed with swelled sides and every upright is ironed edgewise to prevent bulging beyond the normal shape. The roof is heavily reinforced with corner irons.

There are drop windows in the doors on both sides of the driver's seat, with automatic self-closing window flaps to cover pockets when the windows disappear.

Other equipment includes anti-rattler springs and rubber bumpers; a 6-section bus windshield the full width of the body and designed in octagon shape; a cut-out at each side of the dash below the windshield, to fit spare tire and rim, with special hand-forged brackets for holding the spares tight and noiseless; a brass filling outfit with removable cap at the side, for filling the gasoline tank; special compartments for carrying necessary tackle, ropes and tools, these compartments being beyond the rear fenders and running the full width of the body; double swing doors, full height, in rear, with a Roeder up-and-down, hand-forged, four-point locking device; and an 18-inch, hinged tailboard with wrought iron hinges and truss bars.

The entire body inside is lined with removable pads in sections. The cushion

is constructed of springs and genuine curled hair covered with double thick imitation leather. The upholstered back is extra wide. This back is hinged and can be raised to a level and fastened to the side post, thereby making a sleeping compartment for one man, and the seat cushion may be used by another man for sleeping.

Inside the body is a dome light, and at the windshield at the front there are two bus lamps, one red and one green. All these lamps operate with a switch at the driver's seat.

The entire body is painted Packard dark blue, eighteen coats, with lettering of silver leaf. The wheels are painted a bright vermillion.

Description of the Belt Conveyor System at the Pillsbury Flour Mill in Buffalo

PERHAPS one of the most graphic illustrations of the effectiveness and economy of the use of the conveyor belt is to be seen in operation in the comparatively new Pillsbury flour mill at Buffalo, N. Y.

While this is not a public warehouse, at least not strictly a merchandise warehouse in the trade acceptance of the term, the problems are those of the warehouse. Just how true this is may be more quickly recognized by the fact that one of the most clever merchandise warehouse managers in the United States referred the writer to the Pillsbury mills and stated as his sincere and profound belief that a description of the conveyor system there would be of immense value to warehouse operators throughout the country as indicating the possibilities of that system.

Among flour mill experts the interior transportation system at the Pillsbury mills in Buffalo is recognized as the best of its kind in this country. And the warehouse manager mentioned declares it to be one of the most effective and economical labor saving systems it has ever his fortune to examine.

The information herewith is not offered

as a solution of interior and loading and unloading troubles, but as an example of what may be done under certain conditions. There is no doubt that parts of it may be applied in some warehouses which are seriously handicapped today.

#### What the System Does

First as to what the system does; and then, how. Briefly,

1. It enables the Pillsbury mill to produce and load on cars 10,000 barrels of flour daily with a total loading force of approximately 70 men, divided into three shifts of eight hours each.

2. The system makes it possible to load cars 3 and 4 deep on the tracks opposite 7 loading doors.

3. It makes it possible to load a car at the Pillsbury mill in as little time as 19 minutes, with the use of 3, or, at most, 4, men.

4. It makes it possible to place an article from the second floor of the mill, or from the waterfront side of the mill where the ships unload flour from Minneapolis, to any point in the warehouse and inside loading platform by the mere plugging in of a few switches and the simple adjustment of a deflecting board or two.

5. It makes it possible to cut down the charges for labor in handling to one-fourth or one-fifth of what it would be even with the most cleverly placed gravity conveyors.

Those are the high-lights of what is accomplished.

The length of the power conveyor equipment in the Pillsbury mill is a trifle more than 7000 ft.—almost exactly a mile and one-third. It consists of belts before the 25 bagging machines on the second floor, short gravity chutes at frequent intervals leading to the conveyors just a few feet below the ceiling of the floor below, laterals leading to each of the 7 loading doors, portable conveyors or "boosters" for use in the cars, and movable chutes operated in connection with the main conveyors in the warehouse at the end of the loading platform, the latter being entirely inclosed as a main part of the building.

Standardized 5-horsepower motors drive the various sections of the system, including the portable boosters. Belt width is standardized at 24 in. Yet the system has a remarkable flexibility, any part of it efficiently carrying loads of from a pound and one-half per unit to 220 pounds per unit, the containers ranging from small paper sacks up through heavier paper sacks, corrugated containers, cloth sacks of various kinds; heavy drill, burlap, rubber-lined and the others used in foreign and domestic commerce in handling flour and allied products; with practically no breakage or loss.

Perhaps the situation may be easier understood when it is stated that from the standpoint of handling merchandise the loading floor and the warehouse floor is practically one and the same room although the floors are actually at slightly different levels. The total length from end to end is approximately 600

ft. and the width is about 60 ft. On one side of the building the boats from the upper Great Lakes dock and unload products from the Pillsbury mills from Minneapolis. These products may be put instantly on cars which are waiting on the opposite side of the building, via the conveyor system.

The two main conveyor lines run the entire length of the warehouse and loading floor, approximately 15 ft. each from their respective sides of the building. At intervals other conveyors lead off from each of these main lines toward each of the 7 main loading doors. It is possible by this system to receive sacks of flour from both of the main conveyor lines over the same section of the conveyor at the car door, so cleverly is the system hooked up.

In the warehouse portion of the building a movable chute operating on a track parallel with the main belt system, and involving the gravity principle, makes it possible to take packages intended for storage off the belt at any point along the two main conveyor lines in the warehouse and chute them either toward the side of the building or toward the center of the building, as is desired.

In taking packages off the boats, cloth sacks in this case, 5 sacks are taken out of the hold at a time by using a rope hoist. Stevedores working with the typical 2-wheel truck walk down a runway at the left of the opening to the boat side of the warehouse; take their load of 4 or 5 sacks, dropped by the hoist, and push the truck immediately upon a moving platform constructed in such a way that the wheels of the truck are held steady even though there is a slight incline. A few feet inside the building the stevedore dumps his truck on a lifting conveyor which moves the sacks to any part of the warehouse or loading platform, including a car which may even be on the fourth track from the building. Then the stevedore turns to the right and repeats the operation. In this way a great many men may be kept moving and the sacks are scarcely touched by human hands after they leave the boat until they are inside the box car, providing they are to be transhipped immediately, as is usually the case.

As supplemental equipment for use in emergency and in handling some barrelled flour and other special operations,

there are 2 large spiral gravity conveyors discharging upon the main loading floor.

The conveyor system never stops except as certain sections may be shut off when not needed. All belts move at a uniform speed of 96 ft. a minute.

At each opening of the loading floor serving the box cars is a push bottom switch which may be used to start or stop the sections serving that door. Centrally located is a switchboard room with the central panel resembling nothing so much as a telephone switchboard with extra large plugs and sockets. These control all of the various possible combinations of sectional conveyor use.

This switchboard makes temporary tie-ups and the piling up of packages almost impossible, for if something goes wrong with the last section of a booster feeding the cars at a certain door, the plugs may be changed in a few seconds, diverting the packages to another door or to some point in the warehouse.

For the sake of clearness, follow briefly the course taken by a sack of flour as it comes from the automatic fillers and weighers:

The man tending the machine as the sack is filled lifts it still open, so that it stands upon the belt which rolls past his machine. As the sack nears the point where it is to drop into the short gravity conveyor there is an automatic machine which sews the top of the bag closing it. The gravity conveyor or chute carries the sack to the belt of what may be termed the main line conveyor, about 5 ft. below the vertical point from which it started.

If the sack is for instant shipment, the sack may travel along the main conveyor a matter of 50 ft., strike a diverting board, and turn at right angles, traveling about 50 ft. to another conveyor heading it toward the freight cars. A few feet from the door it will drop on a gravity conveyor and, if it is destined for the fourth car from the door, it will strike an electric booster and then another, being received by a worker in the center of the car who will adroitly divert it one way or another to another man in an end of the car who will place it in a pile. Traveling the entire distance of perhaps 150 ft. and descending a total of perhaps 20 ft., it has been touched by only four hands, including

that of the man who took it away from the machine that filled it; and with the possible exception of the last man piling it in the car, none of them touched it except in a momentary way. No effort of consequence was expended upon it. Perhaps a minute and a half—two minutes at the most—have elapsed from the time the sack was filled until it rests in its place in the car.

Under the old system, without the use of conveyors, the sack would have been taken away from the filling and weighing machine by one man, sewed or tied by a second, trundled away on a 2-wheel truck by a third, who would chute it down on a spiral gravity chute somewhere upon the floor below. There, another man would have loaded it on another 2-wheel truck, still another would have trundled it from 50 to 150 ft. into the car, where still another man would have lifted it into position.

The placing of cars, two, three and four deep for loading opposite of each entrance would not have been worth while from a practical standpoint. The breakage would have been several times what it is at present. Much more time would have been consumed and it would have been necessary to employ several times as many men to accomplish the same results with consequent unavoidable delays.

Under the present system the warehouse and loading floor is a quiet place, there is no confusion, no evidence of hurry or anxiety to get things done. At the first glance things may seem to move slowly, even leisurely, but a tremendous amount of work per man is being accomplished in a brief period.

It may be added that the railroad tracks at the loading doors are so constructed that the level of each floor is about one foot lower in each string of cars from the loading door. Also, all of the cars are shifted at once, about 45 minutes being consumed for the operation, during which time mill production is diverted for temporary storage. Shipments, however, practically keep pace with production.

Pillsbury maintenance officials claim that costs of maintenance of the conveyor system are extremely low. It is the job of one man, and a busy one, too, to keep the system oiled.

—Lloyd S. Graham

## Has "Hand-to-Mouth" Buying Become Permanent?

Traffic Managers in Many Industries Give "Yes" as the Answer. If You Are Interested in Their Reasons for This Opinion, Read the Article on the Subject Which Will Appear

*In the July Issue of*

***Distribution and Warehousing***

# Warehousing's Terms and Conditions Have Now Been Standardized

**U. S. Department of Commerce Hopes to Make Them Effective Officially on June 15. Agreement as to Text Reached at Washington Conference of Representatives of Government and Banking, Shipping, Railway, Storage and Other Groups**

By KENT B. STILES

**M**ERCHANDISE and cold storage warehousing's Terms and Conditions—setting forth the business practices of these branches of the industry in their contractual relations with shippers, bankers, railroad officers and other groups—have finally been standardized in phraseology approved by representatives of all these interests, and the Department of Commerce of the United States has recommended their use.

The new Terms and Conditions are to become effective June 15 if by that time the Department of Commerce receives a sufficient number of acceptances to justify the Government giving official indorsement. These acceptances are being sought through the method of sending broadcast a form which the recipients are asked to fill in and return to the Department of Commerce. This form is reproduced herewith.

A conference attended by representatives of the Government, the American Bankers Association, the American Railway Association, the National Distributors' Association, the National Association of Manufacturers, the American Warehousemen's Association and other inter-

ested trade organizations worked out the final draft of the Terms and Conditions in Washington on April 30.

At that conference minor changes were made in several sections, one sub-section was deleted, and the section covering schedule of charges was revised. These alterations were suggested on behalf of various interested groups and were unanimously adopted, in their final form, on motion by Nathan B. Williams, associate counsel for the National Association of Manufacturers, and seconded by William B. Mason, Providence, R. I., on behalf of the Central Bureau committee of the American Warehousemen's Association. The text of the new Terms and Conditions appears on page 31.

F. W. Simmonds of the American Bankers Association told the conference that his organization would recommend approval and adoption to the Clearing House Association throughout the country immediately. This is important in view of the fact that a major function of the Terms and Conditions will be their appearance on the reverse side of the uniform warehouse receipt.

## Forms Sent Out

**O**N behalf of the Central Bureau committee John L. Nichols, Boston, explained that the American Warehousemen's Association at its convention in Washington, D. C., last December gave authority to the executive committees of the merchandise and cold storage divisions to approve any Terms and Conditions which might be worked out in agreement with the various interested groups; and Gardner Poole, Boston, president of the American Warehousemen's Association, told the conference that such approval by the executive committees could be brought about within a short time.

With all these various assurances in hand, A. Lane Cricher, acting chief of the Transportation Division of the Bureau of Foreign and Domestic Commerce of the Department of Commerce, on May 10 sent out to the various interests a summary of the conference and invited acceptances of the new Terms and Conditions so that they might be made effective without undue delay.

## ACCEPTANCE OF DEPARTMENT OF COMMERCE RECOMMENDATION

MAIL this, properly signed, in the attached franked envelope

Date.....

The Secretary of Commerce,  
Washington, D. C.

Sir:

We, the undersigned, do hereby accept the final draft of the Standard Terms and Conditions, dated April 30, 1926, as approved by representatives of interested industries and the Department of Commerce, as our standard of practice in warehousing and warehouse distribution, beginning June 15, 1926, and will use our best effort in securing general adoption of the terms and conditions.

To permit intelligent review of the effectiveness of the recommendation by an accredited committee of all interests working in cooperation with the Department of Commerce we will supply all data, upon request, which may be necessary for the development of constructive revisions. It is understood that any suggested modification will be submitted as soon as formulated and shall not be binding until accepted in form similar to this recommendation.

Signed .....  
Title .....  
Company .....  
Street address .....  
City and State.....

We are members of the following trade associations, or other organizations interested in Standard Terms and Conditions for general merchandise and cold storage warehouses.

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**Here Are the New Terms and Conditions for General Merchandise and Cold Storage Warehouses as Adopted by Unanimous Vote by Representatives of Shippers, Bankers, Railwaymen, Warehousemen and Other Groups at the Washington Conference on April 30.**

**TENDER FOR STORAGE**—Sec. 1 (a) All goods for storage shall be delivered at the warehouse properly marked and packed for handling. The storer shall furnish at or prior to such delivery, a manifest showing marks, brands or sizes to be kept and accounted for separately and the class of storage desired; otherwise the goods may be stored in bulk or assorted lots, in freezer, cooler or general storage at the discretion of the warehouseman and will be charged for accordingly.

(b) The word "lot" as used herein means the unit or units of goods for which a separate account is to be kept by the warehouseman. Delivery of all or any units of a lot shall be made without subsequent sorting except by special arrangement and subject to a charge.

(c) The warehouseman undertakes to store and deliver goods only in the packages in which they are originally received.

**STORAGE PERIOD**—Sec. 2 (a) All goods are stored on a month to month basis, unless otherwise provided. A storage month shall extend from a date in one calendar month to, but not including, the same date of the next and all succeeding calendar months, but if there be no corresponding date in the next succeeding calendar month it shall extend to and include the last day of that month. When the last day of a final storage month falls on Sunday or a legal holiday, the storage month shall be deemed to expire on the next succeeding business day.

(b) Except when other procedure is provided by the warehouse receipts act, the warehouseman may, upon written notice to the storer of record and to any other person known by the warehouseman to claim an interest in the goods, require the removal of any goods by the end of the next succeeding storage month. Such notice shall be given by delivery in person or by registered letter addressed to the last known place of business or abode of the person to be notified.

**INSURANCE, STORAGE RATES, EXPIRATION AND TRANSFERS**—Sec. 3 (a) All charges for storage are on a month to month basis unless otherwise provided. Charges for any particular lot shall begin at the receipt of the first unit of that particular lot in store and shall continue and include the storage month during which the last unit of the particular lot is delivered. Charges shall be made on the basis of the maximum number of units in any particular lot in store during a storage month. All charges for storage are due on the first day of a storage month and all other charges are due when incurred.

(b) Instructions to transfer goods on the books of the warehouseman are not effective until delivered to and accepted by him, and all charges up to the time transfer is made are chargeable to the storer of record. If a transfer involves rehandling the goods, it will be subject to a charge.

(c) The warehouseman reserves the right to move, at his own expense of transfer, and upon notice sent by registered mail to the storer of record and to the last known holder of the negotiable warehouse receipt, any goods in storage from any room of the warehouse in which they may be stored to any other of his rooms or warehouses; but if such storer or holder takes delivery of his goods in lieu of transfer, no storage charges shall be made for the current storage month.

(d) When rates are quoted by weight they will, unless otherwise specified, be computed on gross weight and 2000 pounds shall constitute a ton.

(e) Goods are not insured nor do storage rates include insurance unless so specified in writing. (Adopted with the understanding that in any State requiring insurance by statute the words "or required by statute" would be considered a part of the standard terms and conditions).

**HANDLING**—Sec. 4 (a) Handling charges cover the ordinary labor and duties incidental to receiving goods at warehouse door, stowing and delivering to warehouse door, but do not include unloading or loading of cars, vehicles or vessels, unless so specified. Handling charges will be billed with the storage for the first month.

(b) Goods, at the request of a storer, received or delivered during other than usual business hours will be subject to an additional charge.

**CAR UNLOADING AND LOADING**—Sec. 5 (a) Charges for unloading or loading of cars include use of switch track, labor required to or from warehouse door, and billing of car.

(b) Dunnage and fastenings supplied by the warehouseman and used in loading out cars are chargeable to the storer.

(c) Any additional costs incurred by the warehouseman in unloading cars containing damaged goods are chargeable to the storer.

(d) The warehouseman, unless he has failed to exercise due care and diligence, shall not be responsible for demurrage, nor for delays in unloading inbound cars, nor for delays in obtaining cars for outbound shipments.

**DELIVERY REQUIREMENTS**—Sec. 6 (a) No goods shall be delivered or transferred except upon receipt by the warehouseman of complete instructions properly signed by the storer.

(b) When a negotiable receipt has been issued no goods covered by that receipt shall be delivered, or transferred on the books of the warehouseman, unless the receipt, properly indorsed, is surrendered for cancellation, or for indorsement of partial delivery thereon.

(c) When goods are ordered out, a reasonable time shall be given the warehouseman to carry out instructions, and if he is unable, due to causes beyond his control, to effect delivery before expiring storage dates, the goods will be subject to charges for another storage month; except when the warehouseman has given notice in accordance with the provisions of Sec. 2b, or because of fire, acts of God, war, public enemies, seizure under legal process, strikes or lockouts, riots and civil commotions, if he is unable, due to causes beyond his control to effect delivery before the expiring storage date, the goods shall be subject to storage charges only for that part of the month during which the goods remain in store.

**BONDED STORES**—Sec. 7. A charge in addition to regular rates will be made for merchandise in bond.

**MINIMUM CHARGES**—Sec. 8. A minimum charge will be assessed for storage, handling and other services.

**EXTRA SERVICE**—Sec. 9 (a) Extra services in the interest of the storer, such as special warehouse space, material, drayage, repairing, cooping, sampling, weighing, repiling, inspection, physical warehouse checking, compiling stock statements, collections, revenue stamps, reporting marked weights or numbers, handling railroad expense bills, etc., are chargeable to the storer.

(b) Stock statements submitted in duplicate by the storer will be checked with the books of the warehouseman without charge.

(c) Shipping includes marking, tagging, billing, procuring and forwarding bills of lading and is chargeable to the storer.

(d) Freight and other disbursements made on behalf of the storer are due and payable on demand and subject to interest from date billed by the warehouseman.

(e) Storers, including holders of negotiable receipts, may, subject to insurance regulations and reasonable limitations, have access to their goods in store when accompanied by a warehouse employee whose time is chargeable to the storer.

**LIABILITY**—Sec. 10 (a) The responsibility of a warehouseman, in the absence of written provisions, is the reasonable care and diligence required by law.

(b) Perishable goods, or goods which are susceptible to damage through temperature changes or other causes incident to general storage, are accepted in general storage only at owner's risk for such damages as might result from general storage conditions.

**SCHEDULE OF CHARGES**—Sec. 11. Whenever provision is made in these Standard Contract Terms and Conditions for a charge or charges by the warehouseman, such charge or charges will conform to the warehouseman's tariff in effect at the time the charge accrues or the service is performed, except that no increase in charges within the direct control of the warehouseman will be made on goods that are in storage without a thirty day notice mailed to the storer of record or the last known holder of a negotiable warehouse receipt.

**Mr. Hoover's Talk**

AFTER the Terms and Conditions had been adopted, word to that effect was sent to Herbert Hoover, Secretary of Commerce, and Mr. Hoover entered the room and addressed the conference, declaring that anything in the way of uniformity and security was a contribution toward solving the problem of the cost of distribution "that hangs around our neck" and toward elimination of waste.

The American people were trying to live in an atmosphere of the highest standards of living and highest wages, Mr. Hoover said, and there must be super-efficiency in production and distribution. The disparity between American and European wages was greater today than ever before, he pointed out, and it was "a testimonial to American

efficiency" that this country was able to compete with foreign countries.

There must be maximum efficiency all along the line, the Commerce Secretary declared, and the adoption of standard Terms and Conditions was a part of such a system.

Mr. Hoover concluded by stressing the necessity of self-government in business "to prevent legislative onslaughts."

**Objections Met**

THE conference was presided over by John Matthews, Jr., assistant director of the Bureau of Foreign and Domestic Commerce of the Department of Commerce, with Mr. Cricher serving as secretary. After the purposes of the meeting had been outlined, allusion was made to the uniform documents—receipts, over, short and damage reports,

etc.—worked out some months ago by the American Warehousemen's Association in conjunction with the Division of Simplified Practice of the Department of Commerce and various interested groups. In reply to a question, R. M. Hudson, chief of the Division of Simplified Practice, said that these forms already were being used by many warehousemen and that the division would next make a survey designed to indicate the extent of their use.

The sections of the Terms and Conditions as formerly phrased were then one by one taken up and representatives of the various interests made known which ones to which they would either take objection or regarding which they wished interpretation. By this method of procedure it was developed that all the groups were satisfied with Sections



## Here's the "Who's Who" of the Terms and Conditions Conference Held in Washington on April 30

Chairman, **John Matthews, Jr.**, assistant director Bureau of Foreign and Domestic Commerce, Department of Commerce.  
Secretary, **A. Lane Cricher**, acting chief Transportation Division, Department of Commerce.

**Lt. Col. F. H. Adams**, office of Quartermaster General, War Department.

**H. C. Albee**, New York, traffic manager National Retail Dry Goods Association.

**C. A. Aspinwall**, president Security Storage Co., Washington.

**Capt. Morris Berman**, office of Chief of Air Service.

**E. C. Brown**, warehouse manager U. S. Testing Co., Inc., New York.

**James C. Brown**, manager and treasurer Camden Warehouses, Baltimore & Ohio Railroad, Baltimore.

**Charles F. Cohagan**, vice-president and treasurer Merchandise Storage Co., Columbus, Ohio.

**H. R. Calwell**, Division of Simplified Practice, Department of Commerce.

**E. C. Delgado**, traffic manager Federal Match Corp., Philadelphia, and representing National Distributors' Association.

**Norman Draper**, Institute of American Meat Packers, Washington.

**B. S. Foster**, assistant manager Government Service Bureau, Aetna Casualty & Security Co., Washington.

**A. B. Galt**, Division of Simplified Practice, Department of Commerce.

**Carl H. Horn**, Field Service, Ordnance Department, U. S. A.

**R. M. Hudson**, Chief of Division of Simplified Practice, Department of Commerce.

**W. B. Mason**, vice-president and general manager Merchants Cold Storage & Warehouse Co., Providence, R. I., and representing cold storage interests on Central Bureau Committee of American Warehousemen's Association.

**B. H. Mercer**, assistant secretary Fidelity & Deposit Co., Baltimore, representing insurance interests.

**Edwin Morton**, treasurer and manager Baltimore & Ohio Stores, New York.

**E. E. Mountjoy**, deputy manager American Bankers' Association, Washington.

**John L. Nichols**, treasurer Merchants Warehouse Co., Boston, and representing merchandise warehousing interests on Central Bureau Committee of American Warehousemen's Association.

**A. Heath Onthank**, Chief Domestic Commerce Division, Department of Commerce.

**Thomas B. Paton**, New York, general counsel American Bankers Association.

**Gardner Poole**, president Quincy Market Cold Storage & Warehouse Co., Boston, and president American Warehousemen's Association.

**Edward L. Roberts**, Washington, secretary National League of Commission Merchants.

**Norman C. Settle**, treasurer McCormick Warehouse Co., Inc., Baltimore, and secretary Maryland Furniture Warehousemen's Association.

**Frank W. Simmonds**, New York, deputy manager American Bankers Association.

**Stanley H. Smith**, correspondent *Traffic World*, Chicago.

**Samuel G. Spear**, treasurer Wiggins Terminals, Inc., Boston; president Massachusetts Warehousemen's Association, and representing merchandise warehousing interests on Central Bureau Committee of American Warehousemen's Association.

**Robert L. Spencer**, Pittsburgh, warehouse superintendent Pennsylvania Railroad and secretary Pennsylvania State Warehousemen's Association.

**Kent B. Stiles**, editor *Distribution and Warehousing*, New York.

**Capt. George B. West**, Surgeon General Finance Supply Division, Manufacturers, Washington.

**Nathan B. Williams**, associate counsel National Association of Manufacturers, Washington.

**T. E. Witters**, president Baltimore Fidelity Warehouse Co., Baltimore, and chairman Central Bureau committee of American Warehousemen's Association.

**Harold R. Young**, Washington, secretary National Retail Dry Goods Association.

1, 2, 3, 4, 6, 7, 8, and 9 as formerly phrased, and these were left intact—as printed on page 31. To the phraseology of some of these sections there were some objections, but they were withdrawn after their meaning had been explained by warehousemen to representatives of the other groups.

Divisions "a," "b," and "c" of Section 5 were considered satisfactory. The original of division "d" (now changed to read as printed on page 31, was as follows:

"The warehouseman, unless he has failed to exercise due care and diligence, shall not be responsible for demurrage nor shall he be responsible for delays in obtaining cars for outbound shipments nor for delays in unloading inbound cars."

In the former Terms and Conditions there was a division "e." After objection by other group, warehousing's repre-

sentatives consented to have it stricken out. It read:

"If a checker is not furnished by the storer or carrier when loading out shipments, the warehouseman shall not be held responsible for load and count except into car."

From division "a" of Section 10 (as printed on page 31) two words, "limited to," were deleted at the suggestion of various groups and with the consent of warehousing's representatives. Originally the text read:

"The responsibility of a warehouseman, in the absence of written provisions, is limited to the reasonable care and diligence required by law."

The crux of the series of objections presented on behalf of shippers involved Section 11, dealing with "Schedule of Charges." This read originally:

"Whenever provision is made in these Standard Contract Terms and Conditions for a charge or charges by the warehouseman such charge or charges will conform to the warehouseman's tariff in effect at the time the charge accrues or the service is performed."

Objectors to this phraseology held that irresponsible warehousemen were in a position to be guilty of "gyp practices," such as suddenly increasing rates on goods already in storage or en route without notifying shippers in advance; or such as taking in goods at promised low rates and then increasing the tariffs without due notice to the storer.

The objectors desired some clause providing for a thirty-day notice to shippers. Such a clause—as incorporated in the adopted Section 11 as printed on page 31—was worked out by a sub-committee headed by Mr. Nichols, and the opposing groups declared it satisfactory.

## New York Warehousemen Protest Against Leasing of City Piers

**M**EMBERS of the Warehousemen's Association of the Port of New York met at a luncheon at the Whitehall Club in New York early in May and formulated a protest to Mayor Walker and the Board of Estimate against a bill now before the Municipal Assembly "to permit property appropriated for public purposes to be used by private interests" in connection with the leasing of the \$30,000,000 Staten Island piers built during the Hylan administration.

According to Walter F. Firth of Trustees of the Estate of William Beard, who is the association's president, the Pan-American Dock Terminal Co. has leased piers 12 and 13 at Stapleton, S. I.,

and has used them as warehouses. The State Court of Appeals recently enjoined the company from continuing this practice, as outlined in the May issue of *Distribution and Warehousing*. Subsequently the Board of Aldermen passed a bill amending the law so as to permit the use of these piers as warehouses.

There has been no shortage of warehouse space in New York, Mr. Firth declared at the luncheon, such as would justify that use of the piers. He announced that the association had asked Mayor Walker for a conference and had petitioned the Board of Estimate for a hearing, to present evidence against the Aldermanic bill being finally enacted

into law. Others who spoke at the luncheon are D. L. Tilly, vice-president of the New York Dock Co.; S. C. Blackiston, secretary of the Bush Terminal Co., and W. Clive Crosby, president of the Fidelity Warehouse Co. A formal protest was then formulated by the association.

### Baltimore Co. Leases Plant

The National Warehouse Co., Baltimore, Md., has leased to the United States Rubber Co. a large building at Charles and Barre Streets, recently acquired by the storage firm.

# Here Is a Cost Record System for the Motor Truck Owner

*Consider the Ton Mile, the Package Mile, the Stop Mile. Some  
Factors Which Vehicle Operators Should Appreciate Are  
Technically Explained*

By JAY S. TUTHILL

**O**PERATING costs, though obviously of primary importance to the truck user, nevertheless often are not accurately figured. Or, if attempt is made accurately to figure them, it frequently happens that the user is employing an incomplete system. Indeed, it is true in many cases, even though books are kept and the business otherwise is successful, that almost no proper record at all is made of the operations which in the final analysis are fundamental and have such a definite bearing on the standing of the ledger.

**T**HE operating charges vary from day to day and are incurred by the actual operation of the vehicle—expenses which would not be incurred were the vehicle to be placed in storage.

In a gasoline truck, operating expenses include gasoline or fuel, oil, grease, transmission compounds, etc., kerosene in lamps and for cleaning, salaries or wages of the driver and his assistants, and of the garage mechanic who makes adjustments and repairs from time to time, etc.

In the electric truck the expenses are for current used to charge the battery and distilled water for filling the cells—the latter may be said to take the place of gasoline.

Operating costs sometimes are called running costs.

Maintenance charges are those which are only partially affected by the actual mileage covered by the vehicle or the hours in which it is in operation. These include the wear on tires, practically commensurate with mileage; repairs, overhauling and painting; rental of spare vehicles to take the place of the truck when it is out of service through break downs; and garage rental, etc.

Many truck operators stop with operating and maintenance charges, over-

What are the various phases of motor trucking cost, and how may these costs be accurately figured?

In general, commercial vehicle costs may be divided into three classes:

1. Operating charges.
2. Maintenance charges.
3. Fixed charges.

These apply, of course, to all types of truck services which are done in the warehousing business.

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**A**CCURATELY kept records become more and more necessary in any field where the business is growing. In order to know positively the values which enter into the items of income and expense, a cost record system is essential.

The purpose of this article is to point out clearly the factors of a trucking business which often are not fully understood or appreciated by operators but whose business may nevertheless be successful. In other words, points which are sometimes overlooked.

Herein is explained what is meant by the ton, package and stop mile.

Fleet owners should be particularly interested in what Mr. Tuthill here has to say.

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looking a number of other expenses for which they pay and which are directly chargeable to the operation of the vehicle. These are called overhead charges or fixed costs. They are fixed because they vary only with time and go on just

the same whether the truck is operating or not.

Fixed charges include insurance—fire, liability, collision, etc.; depreciation; interest and miscellaneous taxes; and licenses. Fixed charges represent outlay for which there is no tangible return, but which must nevertheless be paid to enable the owner to secure possession of the vehicle and to retain such possession after the truck has been bought.

## *Calculating Interest*

When a motor truck is purchased, money is taken from the treasury or credit of the purchaser to cover its cost. This operation is an investment and all investments should constantly earn interest at a legal rate.

There are two methods in use by truck owners to calculate the interest on the investment. One is to charge the percentage, whatever it is placed at legally, on the original investment every year. The other is to assume a different book value of the truck at the end of each one-year period and to calculate the interest on this varying investment by means of a formula which will give an average interest over the period of the assumed life of the truck.

There are two ways for the truck

**MONTHLY COST SUMMARY SHEETS**

Number of Truck \_\_\_\_\_  
Capacity in lbs. \_\_\_\_\_ Chassis No. \_\_\_\_\_

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**Investment**

Cost of chassis, less tires	
Cost of body	
Cost of equipment	
Cost of tires	
1—Total cost, complete	

**Performance Record**

2—Days operated \_\_\_\_\_  
3—Days idle \_\_\_\_\_  
4—Days maintained (Item 2 + Item 3) \_\_\_\_\_  
5—Total hours operated \_\_\_\_\_  
6—Total miles covered \_\_\_\_\_  
7—Total trips made \_\_\_\_\_  
8—Total tons or packages or stop-miles \_\_\_\_\_

**Performance Averages**

9—Average miles per day maintained (Item 6 ÷ Item 4) \_\_\_\_\_  
10—Average miles per day operated (Item 6 ÷ Item 2) \_\_\_\_\_  
11—Average miles per trip (Item 6 ÷ Item 7) \_\_\_\_\_  
12—Average tons, stops or packages per trip (Item 8 ÷ Item 7) \_\_\_\_\_ (Item 11 X Item 12)  
13—Average commercial ton-miles, package-miles or stop-miles per trip \_\_\_\_\_

**Recapitulation**

14—Total expenses for month (Sum of Items A, B and C) \$ \_\_\_\_\_  
15—Cost per day operated (Item 14 ÷ Item 2) \_\_\_\_\_  
16—Cost per day maintained (Item 14 ÷ Item 4) \_\_\_\_\_  
17—Cost per mile operated (Item 14 ÷ Item 6) \_\_\_\_\_  
18—Total commercial ton-miles, package-miles or stop-miles (Item 7 X Item 13) \_\_\_\_\_  
19—Cost per commercial ton-mile, package-mile or stop-mile (Item 14 ÷ Item 18) \_\_\_\_\_

**MONTHLY COST SUMMARY SHEETS**

Month ending \_\_\_\_\_ 19\_\_\_\_  
Make of Truck \_\_\_\_\_ Gasoline \_\_\_\_\_ Electric \_\_\_\_\_

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**Operating Charges**

Gasoline	gal.	@	
Current	kw-h.	@	
Oil	qts.	@	
Grease	lb.	@	
Kerosene	gal.	@	
Water	ft.	@	
Dist. Water	gal.	@	
Driver	days	@	
Helper	days	@	
Mechanic	hrs.	@	
A—Total Operating Charges			\$ _____

**Maintenance Charges**

\*Time \_\_\_\_\_  
Repairs \_\_\_\_\_  
Overhauling, painting, etc. \_\_\_\_\_  
Spare vehicle rental \_\_\_\_\_  
Garage rental (per rate) \_\_\_\_\_  
B—Total Maintenance Charges \_\_\_\_\_

**Fixed Charges**

Insurance, fire	@	per year	
Liability	@	per year	
Collision	@	per year	
Interest	@	% (On Item 1 + 12)	
Depreciation on chassis	@	%	
Depreciation on body	@	%	
Depreciation on equipment	@	%	
*Depreciation on tires	@	%	
Total taxes and licenses			
C—Total Fixed Charges			\$ _____

\*Note: Omit one of these.

Through these monthly cost summary sheets the truck owner is able to keep an accurate cost record of every one of his trucks in use. The items on the sheet at the right cover all possible expenses which may be incurred and are classed under three major charges, making accounting easy and efficient. This record at the end of the month is transposed to the summary sheet at the left, which further simplifies the record of costs and shows recapitulation figures.

owner to calculate his motor truck depreciation. One is by the estimated life of the truck in miles, and the other by the life of the truck in years. The tendency at first is to figure depreciation by years, as this method is generally used in calculating the depreciation on other forms of machine equipment.

However, as the use of trucks increases, the method of figuring depreciation at so many cents per mile will gain favor because of its more scientific basis. The cost of depreciation per mile is determined by dividing the cost of the truck investment minus tires, by the estimated number of miles the truck will cover during its use for life.

For cost comparisons the use of the commercial ton mile, package mile, stop mile, or other convenient basis, may be employed, but one term, the ton mile, should be used to cover the business of truck haulage generally.

There are two understandings of the unit ton mile, one known as the "absolute" ton mile, and the other the "commercial" ton mile. For reasons of expediency the comparisons herein will be made only in mile terms.

#### Absolute Ton Mile

The absolute ton mile may be defined as the carrying of a mass of one ton over a distance of one mile. It takes

into consideration the number of tons hauled and the distances over which all or portions of the load were carried.

For instance, if a vehicle started from some certain point with a load of five tons and traveled two miles, it would have accomplished  $5 \times 2 = 10$  absolute ton miles of work. If at the two mile post the vehicle had delivered one ton, leaving four tons of load, which it delivered three miles farther along on the route, the absolute ton mile would have been  $3 \times 4 = 12$ . If it then returned empty over the five miles to the starting point the absolute ton mileage of this portion of the trip would have been  $5 \times 0 = 0$ . The total mileage of the entire trip is the summation of the number of work units accomplished on each portion, or  $10 + 12 + 0 = 22$  absolute ton miles.

While at first thought the absolute ton mileage calculation does not take into account the empty running miles from the point of delivery, this empty running mileage is really taken into account in the cost of operation of the truck in that particular trip or for the total day's work during which the particular trip was made. The empty running mileage is important because it is a measure of the efficiency of the motor truck operation.

It costs almost as much, if not more, to run a motor truck empty, if not fitted

with a governor, due to the excessive vibration of all parts on account of the stiffness of the vehicle's springs designed to carry a heavy load, as when no load is moved.

Figuring on the basis of the ton mile is desirable if the figures can be readily obtained. The difficulty in obtaining the actual ton mile by calculation when loads are picked up at different points of a trip and delivered at perhaps other points makes its use impracticable.

#### Commercial Ton Mile

A more simple system of calculation is according to the "commercial ton mile."

The commercial ton mile is obtained by multiplying the tonnage carried on any trip by the mileage of that trip, divided by 2. This is a simple operation containing only one multiplication.

In order that motor truck owners and operators may know how to find out their exact unit costs of motor haulage, whether figured on the basis of the commercial ton mile, package mile, stop mile, or other method, a cost system consisting of two record units is necessary—a driver's route card, and a monthly cost summary sheet.

The driver's route card, illustrated herewith, has a distinct record on each side: the trip log, supplies required,



workers' time and miscellaneous expenses incurred, being on one side, and the mechanical report, including repairs and adjustments made, on the other.

The number of the vehicle—serial, engine or arbitrary number—should be noted, as well as the driver's name, possible route number, date and time of leaving, when the driver starts his first trip of the day. He should be careful to fill in accurately the trip log, showing not only to and from destination, but kind of haulage done, whether according to tons transported or packages carried, and the mileage, including the time, and also the supplies required, including gasoline and oil, grease, etc., the workers' time, including driver, helper, washer, mechanic, etc., and a miscellaneous additional data necessary to know, as loading delays, traffic delays, accidents, etc.

On the reverse of the driver's card is the complete mechanical report he should make. He should check each part on this list, including ignition, carburetor, lubrication, cooling, etc., as regards the motor; clutch, universals, jackshaft, etc., as regards transmission; and brakes, steering gear, tire condition, and miscellaneous chassis items, such as wheels, springs, frame, radiator, lamps, fenders, etc.

If this system is accurately followed out, simple though it is, it will show the actual average truck cost per day, per mile, per ton, per commercial ton mile, package mile, stop mile, or other unit mile, according to the desire of the owner.

It will show also the tire mileage and the cost of tires per mile; the gasoline consumption per mile, and the cost of fuel per mile; the cost of repairs per mile over any given period; and the total time worked, the time lost in operation due to delays in loading, traffic, or other tieups, or while truck was in for repairs.

#### Monthly Posting

All the items contained on the driver's route card should be posted at the end of the month, with all the cards having been accurately kept, in the monthly cost summary sheet, which will show, when totaled up, the operating charges, maintenance charges, and the fixed charges, in addition to showing investment, performance averages, and a recapitulation of everything.

Following out carefully the plan of the monthly summary sheet, also illustrated herewith, let us say that, considering investment, we have a sum of \$1,015.20 covering cost of chassis, less tires, body and equipment. Totalling this with the cost of tires, \$108.75, the total cost of the vehicle complete of \$1,123.95 is arrived at.

The performance record shows days operated, 26; days idle, 4; days maintained, 30; total miles covered, 803; total trips made, 28; and total packages carried, 2792.

Performance averages indicate the average miles per day maintained were 26.76; average miles per day operated, 30.88; average miles per trip, 28.67;

average packages per trip, 99.7—making a total of 1429.20 average package miles per trip.

Accordingly, recapitulation shows total expenses for month—based on operating, maintenance and fixed charges, let us say, of \$263.05, \$33.26 and \$43.90 respectively—of \$340.21; cost per day operated, \$13.08½; cost per day maintained, \$11.34; cost per mile operated, \$0.42½; total package miles, 40,017.6, and cost per package mile \$0.0085. It will be seen that this basis of figuring refers specifically to the package mile.

The general accounts of the warehousing concern are not interfered with but are rather most beneficially supplied by this simple yet complete cost system.

Truck costs should be accurately kept for these reasons:

1. The owner or operator is thus enabled to estimate the cost of truck haulage as compared with other methods of shipment or delivery.

2. The rates to be charged for public haulage are easily and quickly determined.

3. The cost of operation of one truck with that of another of the same capacity, in the same class of work, and the cost of any one item of truck expense if excessive, are determined without trouble.

#### Bankers' Committee Urges a Curb on Truck Services

NEED for regulation of companies carrying on motor truck service for short haul freight and passenger transportation and for limitation of the number of such companies was advocated in a report submitted to the executive council of the American Bankers' Association, at the latter's recent annual meeting in Pinehurst, N. C., by a committee of the Commerce and Marine Commission.

The report says that motor truck service for short haul transport up to thirty miles is considerably more flexible and convenient than the railroads and that the rail carriers admit generally that trucks are better adapted to this service. Commercial motor lines, however, compete injuriously with the railroads and among themselves, the report asserts, and in the public interest they should be

regulated to the same extent as the railroads. The report reads further:

"Overland trucking companies compete with the railroads to a great degree. In many cases these companies haul commodities in carload quantities and over many routes provide more rapid service than the railroads. In States where there is little or no regulation, soundly operated trucking companies are forced to compete with irresponsible operators who cut rates. No class of commercial trucking operations, whether conducted under State regulation or not, seems to be earning a fair profit, generally speaking . . .

"Competition from motor trucks has been instrumental in speeding up railroad freight in many instances."

### Driver's Route Card

Vehicle No. \_\_\_\_\_ Date \_\_\_\_\_ 192\_\_

Driver \_\_\_\_\_ Left Garage \_\_\_\_\_

Route No. \_\_\_\_\_ Returned \_\_\_\_\_

TRIP LOG							
From	To	Tons, Stops or Pkgs.			Miles		
		Out	Del.	Pls.	In	Out	In
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
Totals							

SUPPLIES	WORKERS' TIME	MISCELLANEOUS
Gal. Gas _____	Driver _____	Loading Delays _____
Kw.-hr. Current _____	Helper (s) _____	Traffic Delays _____
Qts. Oil _____	Washer _____	Accidents _____
Lbs. Grease _____	Mechanic (s) _____	
Qts. Kerosene _____		
Lbs. Waste _____		

O.K. \_\_\_\_\_

### Driver's Mechanical Report

Check each part on this list. Repairman will correct all troubles reported hereon.

MOTOR	MISCELLANEOUS
Ignition _____	Wheels _____
Carburetor _____	Springs _____
Cooling _____	Frame _____
Lubrication _____	Radius Rods _____
Valves _____	Torque Arm _____
Governor _____	Radiator _____
Power _____	Fan _____
Knock _____	Fan Belt _____
Compression _____	Battery _____
Missing _____	Controller (Elec. Veh.) _____
	Motor Controls _____

TRANSMISSION	TIRES
Clutch _____	Pedals _____
Gearbox _____	Lever _____
Universals _____	Windshield _____
Jackshaft _____	Lamps _____
Differential _____	Speedometer _____
Chains _____	Fenders _____
	Cab _____
	Body _____

BRAKES	STEERING GEAR
Foot Brakes _____	Left, front _____
Hand Brakes _____	Right, front _____
	Left, rear _____
	Right, rear _____
	Front Axle _____

Key: O—Performance O.K. A—Adjust. R—Repair

Repairs and Adjustments made, \_\_\_\_\_

O.K. \_\_\_\_\_

The driver's route card gives in detail the kind of trip made, supplies used, worker's time and miscellaneous items. The driver's mechanical report (on the reverse of the route card) is a record, easily and accurately kept, of the condition of all trucks from day to day

# Public Warehousing and Economic Distribution

## Number 15

### How the "Customers Accredited List" System Operates for the Shipper

By H. A. HARING

**T**HIRTY-FIVE years ago, before the advent of the distribution warehouse, time was of little consequence in getting goods from factory to retailer. During the years since the American Warehousemen's Association was projected, "hurry up the goods" has come to be the characteristic business term—a change of commercial methods to which the warehouse has in no small degree contributed.

Gone are those days when the retailer stocked up for six months. Gone, too, the times when a jobber took in twenty carloads from the factory on a single requisition. Today even the wholesaler expects the manufacturer to "carry on spot" the goods he distributes to the trade.

#### Buttressing the Market

**A** MANUFACTURER establishes a stock of goods with a public warehouse at some convenient center. As his salesmen travel the adjacent territory they inform each customer whose business is solicited what sizes and grades of the goods are held in spot stock with the warehouse, with other data as to unbroken-package lots. The jobber—or the retailer—can then push the line without fear of overstocking himself and without the companion fear of running short of goods. The spot stock, standing close behind his sales effort, gives assurance of ready replenishment without risk.

Capital investment is held down, turnover ratio is high, and yet the jobber can book all orders in sight with full confidence that the retailer (or other customer) will not be sent a pink back-order form instead of goods. This confidence he can pass on to the retailer, and it is no mean sales argument.

The process of buttressing the market is completed by the manufacturer's filing with the warehouseman an accredited list of customers. The warehouseman is instructed that he may deliver to each of these accredited customers, out of the manufacturer's stock, anything he asks for. The customer makes his own requisition on the warehouseman, for quantities, grades and sizes, as he wants.

The customer does not telephone or communicate with the manufacturer or with the latter's branch office. All time and formality of that sort are positively eliminated, as are also the costs of telegrams or long-distance telephoning. The circuit from customer to merchandise is shorted to the most direct route. But the great end accomplished is that the customer gets the goods quickly.

The morning mail may bring the jobber orders for goods of which he is "out." Ordinarily he would ship his retailer such as were in stock, with back-

So far, indeed, has progressed this speeding up of deliveries that warehouse short-cuts have developed. "Our deliveries equal letter mail" was the boast of a nationally-known manufacturer, and yet the fact is that his deliveries are too slow. Competitors, in his own line of merchandise, are doing better by twenty hours or more. When the jobber, or the retailer, knows that fresh goods may be had before noon of the morning they are ordered, next morning's delivery looks far off.

The warehouse short-cut referred to is covered in the "customers' accredited list." It is a simple device, evolved from necessity of saving time in delivery.

order for the balance. Thus the jobber would have two shipments to make, with two billings; the retailer, in turn, has two pick-ups at his local freight station (or via truck), with two invoices to check and the inconvenience of staving off his consumer until the back-order comes through.

If, however, the jobber can draw from local warehouse the goods he lacks, it is possible for him to avoid all this duplication, while, at the same time, making good with the distant retailer in that best of all business assets—"quick service, without substitution."

#### Little Formality

**T**HE entire proceeding is so simple that few manufacturers require any set form to be used by the wholesaler when requisitioning goods from the warehouse. The wholesaler's ordinary requisition form is quite acceptable; or a letter request fits perfectly. All that is asked is some written form of requis-

## Public Warehousing and Economic Distribution

tion for protection of the warehouseman, and, on receiving the goods out of store, a receipt therefor.

The warehouseman, in turn, reports to the manufacturer the appropriate information, using the ordinary warehouse forms of report. The manufacturer invoices the goods to the wholesaler, and the transaction is completed.

But—note this: the jobber got the goods within an hour or two.

For turnover ratio the accredited list can not be beaten. It enables the wholesaler to fill orders instantly, and yet without carrying excessive stocks. When he falls back on the warehouse for such emergency deliveries, he has sold the goods before requisitioning them. The turnover is immediate; and payment from the retailer who "takes his discounts" is due on the very day that the manufacturer's invoice matures for the same goods.

One further step is needed. The manufacturer provides the warehouseman with a list of customers who are privileged thus to requisition on their own behalf. This is the "accrediting" part of the arrangement. The list is ordinarily in the form of a letter, although of course large users of this system have developed a business form for this purpose. As a rule, also, a limit is set to the credit to be granted to each customer; some are classed as "only C.O.D. accredited customers." There are occasionally further classifications, but all these are matters of detail. From time to time the manufacturer cancels, adds to, or modifies, his list, but nothing of difficulty is here presented.

The warehouseman keeps a card index file for each manufacturer, with a card for each accredited customer. Other necessary data are carried on these cards. When the credit is canceled by the manufacturer, the card is marked to correspond, and so on.

One warehouse, during the past winter, showed me a list of 39 automotive manufacturers who maintain accredited lists with that warehouse, this list being longer than any automotive list before encountered. Another warehouse tells me that it has more than 200 stocks of goods in store with accredited lists to correspond.

This is a particular service," says a Chicago warehouseman who is a leader in the industry, "that is being rendered by public warehouses more and more extensively."

"The accredited list," remarked a manufacturer of baby-cabs, "has become the backbone of our business. We ship them in carloads to the warehouses. The most the retailer needs is a sample or two. He has a carload at his back, and the fond mothers can't come fast enough to deplete that reserve stock."

### National Distribution

NATIONAL distribution is the goal of the manufacturer. Such distribution means both urban and rural sales outlets. It may be perfectly correct to state that Albany will absorb more electric fans than the whole State of Nevada; the manufacturer desires both markets, and aims to saturate both of them with his product. And, when it comes to such a product as leather boots or picks and shovels, Nevada will outrun the city of Albany: but, again, the manufacturer covets both markets.

Hence the manufacturer must see to it that his goods are stocked by as many

wholesaler does not create consumer sales. Goods shipped to wholesalers by the factory may or they may not promote retail sales. The wholesaler may stock the goods but not push them or even sell many of them.

It is not necessary, therefore, that the manufacturer's goods be handled by every jobber. Retail dealers, as they buy from jobbers, do not buy in person. They are seldom known by sight at the jobber's office. Their orders go forward by mail, by telephone, or through the jobber's visiting salesman. If one wholesaler happens not to represent the line the retailer wants it will be only a day or two until the salesman of another jobber drops in, or the retailer orders for himself. The condition is quite unlike that of the retailer's customer, who buys in person.

The retailer's convenience, in short, is served if enough wholesalers stock the goods so that they can get them quickly and surely. The manufacturer, therefore, wants *universal* retail distribution, but he requires only *adequate* wholesale distribution. Every retail outlet is desirable as a connection; every wholesale outlet is not necessary.

The more retail handlers of the goods, the better sales. The more wholesale handlers, often the worse it is for sales, because needless jobbers injure the essential wholesalers by slashing prices either through additional discounts or via the route of allowance, inducements, and the like.

Now, as the retailer will not stock far in advance of calls for the goods (often could not afford to if he would), and as every wholesaler is cutting down inventories in order to jack up his turn over ratio, the manufacturer's position becomes clear. He must choose between:

(1) Risking that wholesalers will be out of stock for his goods, and thus be unable to supply retailers quickly and

(2) Himself seeing to it that wholesalers never lack the goods.

No manufacturer desires the first of these alternatives. The obvious happens. The manufacturer ships his goods in carload lots to a public warehouse, conveniently located with reference to wholesalers. In this manner the two problems are forestalled: the jobber does not have to wait for freight shipment to arrive and he never disappoints the retailer by a back-order slip.

Thus the producer's goods are always close to the market, ready for spot delivery. Sales by wholesalers are not lost because it became necessary to substitute some other article that is "just as good." The consumer demand created by advertising and by quality of the product, is not sacrificed just because

THIS fifteenth article of the series "Public Warehousing and Economic Distribution" points out to the national distributor the advantages that will accrue to his business through establishing accredited lists of customers, these lists being filed with the warehousemen handling the distributors' stocks. How such a system works is here explained by Mr. Haring. When this plan is in operation—

1. The shipper's market is always supplied with goods.

2. Consignment selling is avoided.

3. Large open accounts are obviated.

4. Orders come only as goods are absorbed into trade—not on estimates of demand.

5. The manufacturer knows definitely where his business is going.

The sixteenth article of this series will appear in the July issue and there will be others in the months ahead, touching on storage, freight rates, the jobber problem, less-than-carload lots, State laws, and a variety of kindred fundamentals—a storehouse of information for the national distributor.

retail outlets as possible. Retail buyers make their purchases in person. The more often they see the goods and the more conveniently they can buy, the more they take home. If, also, the buyer prefers an "American Fork & Hoe Co." pick but fails to find one in stock of the right size, it is a certainty that he will lay down his money for some other maker's pick rather than to return to the ore diggings without a tool.

This principle is the fundamental of retail distribution. The same rule does not, however, apply to wholesaling. The



# Public Warehousing and Economic Distribution

some unknown retailer did not have the article on his shelf.

The goods are so close at hand that delivery is not delayed beyond a few hours.

## How the Salesman Works

A MANUFACTURER who uses warehouse accredited lists patronizes many warehouses. A spot stock in each city where a sales branch is maintained is far from sufficient. In fact the accredited list is hardly needed within the city where an agency exists.

The cost of warehousing at one point differs only slightly from the cost at another city two hundred miles away. If the manufacturer of a national product, with good sales volume, desires to dominate his market all the time, he might, as an illustration, maintain a sales office in Cleveland for northern Ohio. From this office his men would travel that territory.

Should this manufacturer, however, attempt to maintain only one spot stock, and that in Cleveland, he would miss the opportunity given him by public warehouses. He might fittingly hold warehouse stocks at Akron, Mansfield, Youngstown, possibly at more centers, providing each warehouse with an accredited list of customers within trucking distance. In this manner all customers of the manufacturer within these smaller cities would be within one hour of fresh stock and no customer anywhere in northern Ohio would be more than three hours by truck from complete stocks of the goods.

It must be borne in mind, always, that the public warehouse is not a morgue for dead stocks. The factory has not sold the goods when they are consigned to a public warehouse. The goods are, indeed, closer to the market. They are, for banking purposes, technically "in the process of distribution and marketing" and as such come within the Federal Reserve Bank's commodities for rediscount privileges, but the goods are not actually sold just because the factory manager's eye does not light on them each morning as he goes through the plant.

Properly distributed warehouse spot stocks help the salesman mightily as he visits his trade, for he has all the arguments of speedy delivery and quick turnover at his command. Nevertheless, the salesman must still sell his goods. The convenience of delivery has been enhanced by warehousing the goods, but the limitation of the accredited list is still to be remembered.

The accredited list does not sell goods. Just to recommend a customer for this privilege of requisitioning goods at will

come only as goods are absorbed into trade. The warehouse inventory is, accordingly, always "a bare inventory" in that it shows the balance of stock not absorbed into ultimate channels.

When the manufacturer uses warehouses and the accredited lists he knows definitely where his business is going; or, like a driver, he knows the route he is following. This is different from driving for some vague destination. Such a manufacturer is not trying risky shortcuts over back roads, he is not attempting impossible time records, nor is he drifting into unknown situations.

"On a long trip, to know the road will add ten miles per hour to your speed," and the seasoned manufacturer has quit experimenting with faulty road maps. He wants to reach every retail outlet for his goods with greatest expedition; that may be attained best by using many warehouses, well selected, and providing the warehouseman with accredited lists of those who are entitled to have their goods on their own requisition.

## For the Warehouseman

ONE final word about the accredited lists. The patron—that is, the manufacturer—who uses an accredited list must be given prompt reports of withdrawals by accredited customers, with complete documents attached. These reports are wanted today, not next week, or at the end of the month. The warehouse patron wants an equally prompt report, with remittance to balance, for all C. O. D. withdrawals from his stock.

More complaints against warehousemen have come to my ears, from manufacturers, on the slowness of reports of this sort than for any other cause. There may be some excuse for delay of a few days in making up monthly statements, getting out inventory balances, invoicing for storage and other charges, but if there is anything the warehouse patron must have it is a prompt and complete report of withdrawals from stock by accredited customers—for, remember this, the patron gets no advice of any sort from the accredited customer. The only report he gets is that which comes from the warehouseman.

## A Suggestion to the Warehouseman

IT will repay public storage executives to place these articles by Mr. Haring in the hands of shippers who comprise the present patrons and potential customers of the warehouses.

At only nominal cost reprints are available for distribution to shippers on your list. A line to the business manager, A. K. Murray, will bring you details as to the prices.

Many of your competitors are building business in just that way with these reprinted Haring texts.

does not mean that he will become a large buyer. It helps him to buy profitably, but the salesman's work remains the same as it was.

The immense advantage of using the accredited list is that the market is always supplied with goods. Every customer of the manufacturer has the product without fail. Consignment selling is avoided; large open accounts are obviated, because goods are taken up by the customer from warehouse only as needed and as sold. Orders do not come to the factory on estimates of demand or through enthusiasm of the buyer; orders

## "It's the Cat's Meow!"

AND it will be heard in an early issue of *Distribution and Warehousing* in the form of a constructive article by Mr. Haring on the problem of rats and mice in public warehouses.

The text will be brim full of correct information about the right kind of cats for ridding the storage plant of rodents—what kind of cats to use and what kind to avoid.

When a prospective customer sees rats scuttling to cover in the warehouse he is not impressed. Many warehouses have lost business because of that—as Mr. Haring will point out!

Watch for this article and remove the rodent ravage!

# Distributing Small Shipments Through Warehouse and Railway Terminals

By UTHAI VINCENT WILCOX

ONE of the difficult problems facing the business world of today is the expeditious handling of the small shipment. During the years which followed the World War the public warehouses, as well as merchants, manufacturers, jobbers and transportation interests, have been perplexed by the trend of hand-to-mouth buying. Previously shipments of goods had been largely in carload lots which were more efficiently handled from the spur tracks of the manufacturer to the public warehouse in the large city. Carload quantities could be more

expeditiously handled than the present small shipment, which must be loaded and reloaded frequently.

Today the merchant refuses to tie up his capital in large stocks of goods. The lesson of the deflation period still has its influence. Instead of purchasing from four to six months in advance the retailer buys no longer ahead than is absolutely necessary. Small quantities of merchandise must frequently be moved about. The manufacturer must have large stocks on hand, strategically located in public or private warehouses. He must forward these on short order.

## Policy Widely Felt

SUCH a policy long carried out was bound to be widely felt through the whole distribution system. One of the first places to feel the result of such a radical change were the railroads. Previously they received for shipment goods in carload lots and sent through to their terminals and on to the merchants and wholesalers quickly and easily. Now the handling of the freight is largely in small lots, which necessitates greatly increased costs in handling and frequently long delays.

Modern railroads were conceived, constructed, and have long been systematized to meet the long-haul demands. As population and industries have grown, towns, cities, junctions and terminals have been developed along previous long-haul routes and these have in ratio reduced the average length of haul on our railway lines.

It is probably true that in the United States, Canada, South America, Russia and Africa the heavy standard equipment always will be essential for a large percentage of trunk line movements regardless of how short haul less-than-carload business may increase in the future. As it is impossible to operate in joint service the heavy and light road equipment, it is apparent that transportation costs must soar with population increases unless the proved economies of heavy capacity equipment for long hauls and light equipment for short hauls can be coordinated under some method that will provide for the increasing amount of less-than-carload shipments.

For example, in the United States terminal costs in the congested sections confiscate more than 64 per cent of the gross less-than-carload tariff receipts.

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HERE is a graphic story of how less-than-carload shipments are handled at railway terminals and public warehouses in Cincinnati with daily service of 225 demountable unit container bodies; 66 electrically-operated hoists, and a fleet of 15 motor truck chassis operated under telephone control of a joint despatcher.

This equipment had displaced a daily service of 225 box cars and 115 heavy horse drays and more than 300,000 railroad switch-cut movements annually.

Railway costs have been reduced 50 cents a ton, and there was not a single claim for loss and damage in the movement of 400,000 tons of freight.

The new equipment handled more than twice the tonnage and nearly three times the ton-miles, as compared with the previous method.

How the Cincinnati system operates is here told by Mr. Wilcox.

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As it is admitted by the best authorities that the terminal costs increase as the scale of population increases, and as all such must be made out of the tariff, in addition to transportation cost (which likewise increases out of all proportion with the shortening of the average length of haul), it is a serious problem how long the steadily diminishing long-haul traffic can support the accruing costs by present practice of short-haul business and less-than-carload lot shipments.

Around the metropolitan centers of the large cities of America there have

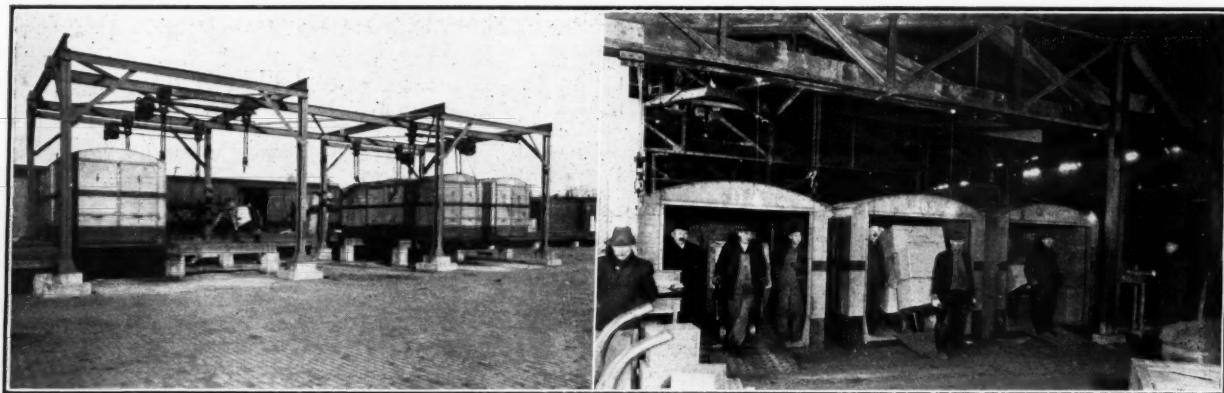
been developed great terminals, with the warehouse acting as the intermediary between the transportation system and ultimate distribution to dealers, owners and merchants. In these districts the ever-increasing industrial development is putting such demands on the railroads for quick handling of the small shipment that business interests at both ends suffer seriously.

To meet the very evident demand for quicker handling of small shipments many of the railroads are considering increasing their track capacity, but to do this only tends to increase storage capacity and in the end follows the same vicious circle which is causing many of the delays that are so costly these days.

Some of the established roads, notably the Pennsylvania and the New York Central lines, have recently been experimenting with the use of motor trucks as auxiliary to their regular freight service in the handling of their short haul "peddler" freight. These are being used where a truck can replace one local freight train. Payroll economies only are being considered. There is also the relief of the main track. One railroad executive stated that, for his line, the taking off of one local peddler train per day was equal to the use of another main track for two hours daily.

## Heavy Terminal Costs

THE railway problem in the handling of the short haul freight and the small shipment, with its sorting and distributing and handling and re-handling over many railway lines, is a very acute one at the present time when there is such a tremendous increase in small quantity shipping. Merchants are delayed in the obtaining of their rush or-



Left—An outlying station—Norwood, near Cincinnati—of less-than-carload handling system for railway terminals and public warehouses. Right—Freight being unloaded from containers and then run into box cars. The process as used by all the railroads is the same—from box car to container on truck, or from truck by way of container to box car

ders and buying on, a hand-to-mouth basis, and this delay is sometimes costly. The railways lose money, which in turn affects the general prosperity of the country. And certainly there is a very distinct effect on the public warehouse.

The motor truck with associate freight-handling equipment in its highest stage of operating development has successfully met this perplexing problem at Cincinnati, at a cost to the railroads of only some \$150,000 after a huge terminal improvement program involving a capital expenditure of \$12,000,000 had been under serious consideration.

The problem was solved by making the fullest use of all existing facilities at minimum capital expenditures, resulting in greatly decreased railroad operating cost and in direct benefit to shippers by advancing the movement of freight through the terminal and to the warehouse more than two days.

The experience has shown that the terminal capacity could be greatly increased by application of a unit-container interchange, and it was also proved conclusively that the intra-terminal transfer of practically all less-than-carload shipments could be accomplished cheaper than by operating partially loaded box cars over congested terminal rails.

This operating demonstration points directly to the establishment of off-track freight stations and possibly a location of warehouses that will develop new industrial districts in outlying or suburban zones in order to equalize facilities.

#### The Terminal Dilemma

THE dilemma that existed at Cincinnati was similar to that of all large industrial cities. During the early development of railroad transportation, carriers located their principal terminals and main freight stations and warehouses as nearly as possible at the strategic center of each city in order to enjoy the traffic influence of shipper's short haul.

At first the interchange of freight was confined to transfers between railroads'

main freight stations, where loads were consolidated into cars for dispatch to line destinations. Then, with the crowding of industries to outlying zones, each railroad established sub-stations as traffic influence to encourage additional industrial developments.

Loads delivered to these suburban stations or sub-stations are brought to the main freight stations in partially loaded box cars, commonly called "trap," "transfer," or "ferry" cars, and their loads there consolidated into cars for line haul. In addition to such consolidations from sub-stations, there developed the demand for main station or transfer groupings of small shipments originating at manufacturing plant sidings which were originally intended for carload service only. Also, there came to be the large volume of business from the great public warehouse.

Besides this demand for intra-terminal movement of local shippers' freight, there is the larger volume of less-than-carload freight, interchanged by "trap" cars between main freight stations of connecting lines, perhaps to warehouses, in the movement of through freight. Add to this, car movements to and from train classification yards and reclassifications at yards of all connecting lines, and the skeletonized picture of less-than-carload terminal operation. It is a picture to arouse the sympathy of distribution officials.

When it is necessary to multiply the number of cities by the plurality of stations within each other terminal city, plus the handling and dispatch of local way cars, the problem of interchange, public warehouse, consolidation, and line haul, becomes tremendously involved. A study of terminal problems in any large city will readily show that a proper and lasting solution in behalf of carrier, warehouse and shipper means the solving of the small freight problem.

#### As Handled in Cincinnati

AT Cincinnati seven railroads enter the city, serving twenty-eight main and sub-stations. The interchange of

small shipments between all these stations had long since overflowed the capacity of terminal rails to accommodate the underloaded trap cars collecting their small consignments for consolidation into line haul cars. When this point was reached the overflow interchange was accomplished by horse drays, until finally 115 heavy drays and an average of 105 trap cars were daily in service. Still, an ever-accruing volume of less than carload freight interchange threatened the necessity of a large expansion of actual terminal plant—more terminal rails, more track storage capacity, more classification capacity, and more station platform capacity—at carriers' investment and pyramiding operating costs.

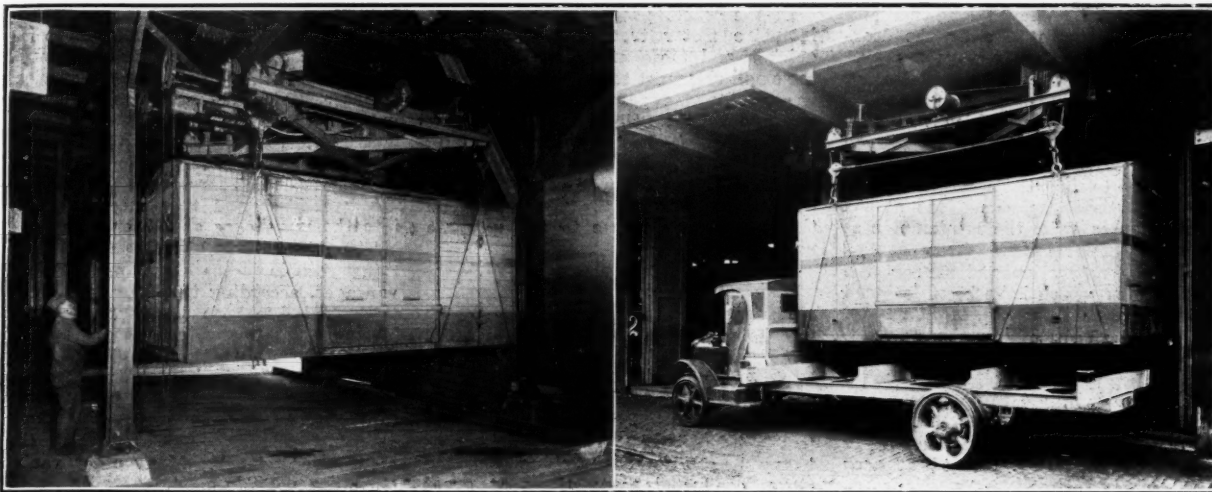
The use of the motor trucks seemed to be the answer, plus the development of a container-system that would make for interchange between warehouse and freight sheds. Research at other terminals had led to a trial of several methods of operation by motor truck.

It was at first purposed to use the tractor-trailer system; but this was abandoned, as tonnage studies demonstrated resulting congestion of trailers around stations, and confiscated trailgate capacity of platforms, together with necessary rehandling costs.

As an alternative it was then proposed to convey freight in 4-wheel low platform hand trucks with side frames, 5 each to be carried in the motor truck platform for quicker loading and unloading to obviate the objection encountered by attempting trailer service. The test of this method proved it both costly and impracticable. As compared with larger units, loads proportionate with displacement could not be carried, due to disproportionate weights and dimensions of all less-than-carload commodities.

The conclusion was that the only practical means of intensive and efficient motor truck service would be through development of the maximum capacity unit container demountable-body for full-load utilization of cubical contents, to serve as large unit sorting bins at stations and to assure quick dispatch of maxi-





Left—The container is run on overhead tracks to the hoist and can be dropped on the freight shed floor, ready for loading and unloading. Right—A view of the overhead trolley. The load of freight is trolleyed out over the chassis for lowering

mum loads and adaptable to warehouse distribution.

#### *A Success from the First*

**T**HIS system of transferring less-than-carload shipments between local freight stations and warehouses reduced the time for movements 52 hours, and at the same time the cost of handling decreased 35 cents per ton. The cost of breakage was eliminated altogether.

The system went into operation first between five stations of the Big Four Railroad for the interchange and consolidation of less than carload freight. This use of the motor truck as worked out was a success from the first and was soon adopted by all the railroads entering Cincinnati and many of the warehouses.

Briefly, the equipment consists of 225 demountable unit container bodies, one for each railroad movement demand; 66 electrically-operated hoists, at minor stations for lifting and conveying bodies; and a fleet of 15 motor truck chassis operated under telephone control of a joint dispatcher. Remarkable as it may seem, this simple equipment replaces the services of trap cars and horse drays previously employed in this small freight interchange.

In operation, sub-station freight, when received from shippers' or truckmen's drays, either at main stations or from cars, is trucked directly in bodies into which it has been stowed by railroad employees. A warehouse fills the containers in its own building and if sending it to another city may send it through without removing shipments from the container. If to the station, it is sent in this removable body direct without many rehandlings.

Connecting line freight enjoys a continuous movement from inbound station cars to containers, less all rehandling expense, as empty containers are spotted and always available for each interchange movement demanded.

When loaded, each container is sealed and the dispatcher is notified that it awaits movement to a given station or warehouse.

By this means the chassis can be kept in practically continuous operation, making about 27 trips each working day.

Speed in handling bodies is reflected by approximately 20 minutes time per trip between all stations within a 10-mile zone.

Previously an average of 62 hours was consumed in interchange. This has been reduced to current movement in a 10-hour day or a minimum advanced 52-hour movement of freight, to direct benefit of warehouses and shippers. The continuous daily service of 225 box cars, 115 heavy horse drays, and more than 300,000 switch-cut movements annually, has been eliminated to relieve terminal, rail and street congestion.

By reason of the direct run of freight between cars and container bodies, functioning as sorting bins on station platforms, an enormous saving in freight house labor has been effected. The same applies to the warehouse.

The use of stations for temporary storage, with attendant rehandling of freight and confiscation of platform space, is no longer necessary. It is particularly significant to note that 15 motor truck chassis have handled more than twice the tonnage and nearly three times the ton-miles previously requiring 115 heavy drays. Delivery and receiving doors of stations previously congested by transfer horse drays are now available to shippers without cost of waiting in line.

As indicated by the figures of one of the railroads, about 28 per cent of all less-than-carload freight passing through Cincinnati stations is being handled with 15 motor truck chassis. The same figures indicate a 53 per cent decrease in total loss and damage claims. The saving alone has more than paid for the service by that railroad at published rates. In handling more than 400,000

tons of freight there has not been a single claim for loss and damage.

The cost of the railways by the terminals company that operates these containers, as compared with the old horse dray service, has been reduced by more than 50 cents a ton. Estimates show that the average cost of trap-car transfers was approximately 35 cents a ton greater.

#### *Able to Handle More*

**V**ERY important is the fact that the traffic volume capacity of Cincinnati's old terminal plant has been vastly extended merely by a better method of operation, permitting the present continuous instead of the previous interrupted movement. Station rails and platform space have been extended for warehouse use some 30 per cent through elimination of driveway congestion and box cars in trap service which occupied station and terminal rails—and by direct run of freight between cars and containers.

In installing the necessary equipment for the transference of the demountable bodies from the freight house floor to the truck or from the public warehouse floor to the trucks, and *vice versa* at the station, no uniform type of construction was adopted, but plans were drawn to meet the conditions existing at each individual plant and point.

In some houses driveways were provided—within the structure—on which the trucks may be packed; at some points where this construction was adopted it was necessary to depress the driveways to secure the requisite overhead clearance, while at others the trucks drive in at the street level.

At other points—warehouses or stations—where conditions do not lend themselves readily to such a plan, the trucks drive alongside or back up to openings in the side of the house and the bodies are then transferred into the

house and then trolleyed longitudinally a sufficient distance to clear the doorway. From 1 to 6 driveways are provided at each house, a total of 68 being installed at 34 houses.

The superstructures which are constructed over the driveways and the floor locations of the demountable bodies are designed to meet the particular clearances and other local conditions at the various houses with the minimum cost for building alterations. They are of light steel construction and support the electric hoists which have been designed specially for this purpose, with a novel weaving device to insure the accurate aligning of the body with the chassis. They are equipped with Sprague standard hoist units of  $7\frac{1}{2}$  to 10 horsepower for lifting and  $2\frac{1}{2}$  horsepower traveling motors, with conveniently located electric controls. A hoist is provided at each driveway.

In the whole program of developing intensive motor truck service for the quicker and more efficient handling of the small shipment the motor truck must be the limiting factor in determining size and weight. The economy in truck practice has shown the need of working as large units as possible. With fleets of trucks the greatest economies may be obtained by moving the maximum load the maximum distance to the ultimate point of transfer.

#### Problem of Assembly

Here is found the need of the public warehouse as points of reconsolidating smaller loads into larger units for longer hauls. The problem is one of assembly as much as of distribution.

The future importance of such a system is emphasized by existing volume of heavy long distance trucking between cities, conducted many times at great

cost to shippers requiring quick overnight delivery, to say nothing of the increase in maintenance costs of highways to support such a transportation service.

One official said that the same service in point of speed and availability might be furnished at approximately one-third of the present cost of trucks, by putting containers on flat cars overnight between the two cities and then running them into the warehouse at the end.

The adaptability of such a unit container system is one of the greatest advantages, according to Motor Terminals Co., which has been studying the problems of a right handling of merchandise. The unit container may be filled at the manufacturer's plant, placed on freight cars, and lifted from them to be taken to the warehouse on trucks and there stored, but later distributed from the container by truck. Many other variations are possible.

## New Business for Warehouses

### VII

### Why Cooperative "Education" of Prospects Is Needed

**D**URING April a Chicago manufacturing concern that makes a seasonal line of goods (cabinets, consoles and cases for radio receiving sets), signed a lease for a fourth building for storage of its product. The president of the company tells *Distribution and Warehousing* that the trend of radio receiving sets is for "furniture-type models" and that his company, in anticipation of next winter's demand, is proceeding at full-time operation during the spring and summer. In order to house the goods—for the cabinets are bulky, like all furniture—this company is now stuffing to the roof this fourth leased building.

"Why not warehouse your cabinets?" was asked of him, and, so quickly that the reply astonished the questioner, came this:

"But our cabinets are new goods—not second-hand furniture."

What was the meaning?

Nothing else in the world but that he, the president of a concern which did \$3,000,000 worth of business in 1925, knows absolutely nothing of warehouses, except as places for household goods storing.

**T**HE general manager of a company in New York City, operating a chain of retail stores in the United States and Canada of 3600 units, reports that his company has about 120 "distributing warehouses." Year after year this firm acquires ground, erects a building and opens up another distributing warehouse in some new city, in accord with a policy

of having each of the 3600 retail stores brought within trucking distance of a warehouse. Says this gentleman:

"We get best turn for our investment when we cut down the time from warehouse to retail store. Our store-rooms are all in the high-rent districts of the cities, and to earn the rentals we pay we must utilize every inch of sales space. Storing surplus at the stores would be crazy-headed, and so we build warehouses where rents are cheaper and where we can get track connection for incoming goods. We do our storing there, and then with trucks make two and three deliveries per day to each retail store.

"It's getting terrible all over the country. Every city we enter, we are gouged more than last time for truckage frontages for our warehouses."

#### Fogies

Asked why they persist in building for themselves, came this reply:

"Half a dozen places we've been able to lease on gross rental basis a section of some new warehouse that is being built. Some of them are whizzes for us, too. We can handle our goods from sixty cents to two dollars a ton less, mostly on account of the lower overhead; and we'd do it everywhere if someone could get the story across with our directors. They're mostly oldish men—you know how they are—and they're almighty hard set in their ways. The way we're doing it is the way it had to be done when they ran the business, and they just won't listen to any of us."

**G**OING into Cincinnati, the last morning of April, a representative of *Distribution and Warehousing* met the sales manager of a Connecticut maker of small tools. To the query "What brings you so far from home?" it was learned that:

"Our company's in the fix of the house when your cook takes French leave. . . . We have our warehouse over the river at Covington, Ky., but the door's been locked for over a week, and, with spring business coming on, we're stampeding all our best customers to our competitors by not delivering their orders.

"Our stockkeeper died this winter. The man we hired quit us cold the middle of April; his assistant is sick; and the third man is only a boy. I'm out here to see if I can straighten things out myself. I've brought two men from the factory, who'll know how to get out the orders that have accumulated, without boxing up the wrong stock numbers.

"A sales manager's supposed to spend his time directing salesmen and mapping out sales policies, but it's all bunk—leastways with me it is. The biggest worry of my job is managing the stockkeepers and trying to train men who'll read labels on cartons before they box them up for shipping. For the life of me I can't see why even a dumbhead can't read plain words on the end of a package, but every day some bonehead sends out a dozen six-inch wrenches instead of six-inch pliers, or 50  $\frac{3}{8}$ -inch taps for 50  $\frac{3}{8}$ -inch dies; and there's all hell to pay."

When the obvious question was put to him, he replied:

"Never. Not for us. Do you suppose we're going to let some public warehouseman know where we ship and what we ship, and then have him blab it to our competitors? Before any warehouse gets our business they'll have to show me that they deserve our confidence. We can't afford to have it known every time we open up a nice account for tools. It's hard enough to get the business without broadcasting it to the whole trade."

A PACIFIC Coast cannery, which shipped upwards of 4000 carloads during 1925, accumulates less-than-carload orders for each city (or reasonable reshipping territory) until solid carloads can be loaded out. The manager says:

"Oh when our customers (retail grocers) run low, it's up to them to take care of themselves. I do know, through our salesmen and the commission men, that there's a lot of swapping stocks among near-by grocers, but that's their worry, not ours."

He was asked: "What happens to Mrs. Housewife who wants your particular brand, and finds her grocer without it? Do you think for a moment that she serves ham and eggs to her family instead of Pacific cherries."

"No," with some reluctance, "I suppose—I guess—no, of course, she doesn't."

Doesn't your shipping policy nullify, in effect, a whole lot of your advertising and the work of your selling force? You declare that it's the grocer's worry, not yours. That may be right, but surely the loss comes on you, not on the grocer. He sells Mrs. Housewife another brand, and his profit is just the same. He loses nothing; you a sale. I'd guess that he's not the one to worry. How about your company? You're spending a thousand dollars on this trip trying to find out what ails your market. Isn't that a part of the answer?"

ANOTHER canner, from California at this time, regularly warehouses his output close to the cannery, much of it under custodian arrangements, "because we have to satisfy the banks for their loans." He continues:

"No, we do no warehousing anywhere else. It would be impossible to finance our pack so far from home. We pledge everything to the California banks, and when shipment goes out all the documents go to the bank. The season is almost on us again before we're clear."

"No, no eastern warehouseman ever explained that to me. Hundreds of them write to us wanting our business and making all sorts of pleas for us to ship them big lots for distribution through the winter, but I don't believe we could finance ourselves on the warehouse receipts so far from home. Another reason why I don't believe it, is that no warehouse has ever approached us on that basis. If they can do it, why haven't they made a play for the business? God knows, the California banks would be glad to get from under for a part of the

(Concluded in last column)

### Here's a 5-in-1 Opinion

FIVE men lingered recently at a luncheon table—three warehousemen, a banker whose firm has underwritten several warehouse bond issues, and a member of the editorial staff of *Distribution and Warehousing*. During the lull which preceded the breaking up of this informal conference one of the five asked:

"What does the merchandise warehouse industry most need?"

"That's clear shooting," the banker said. It's plain as a bull's-eye. If we five each wrote down the answer, all five would be identical."

Following out the suggestion, each man scribbled on his menu card or a scrap of paper his conception of the principal need. Here are those answers:

1. "Advertising."
2. "Publicity."
3. "Advertise its economies."
4. "Tell it to the world."
5. "Some concerted movement to educate the big prospects who cannot be reached by ordinary solicitation for their business."

Wonderfully true—isn't it?—that rejoinder of the banker when he said "All five would be identical."

Read these specific instances of how potential business is being lost right now to warehousing because the industry has not advertised itself and its facilities and services in the way it should be advertised!

load they carry at the height of the canning months."

WAREHOUSES are being constructed, fine and modern and complete, in city after city. They evidence the faith of their projectors in the soundness of warehousing in our commercial organization. The place of the merchandise warehouse is unquestioned as a means to cut costs of distribution.

Side by side with these public warehouses are rising private warehouses, for many of which the cost of operation must be out of all proportion to what it might be. They are built, many of them, out of ignorance of what public warehouses offer—the fault being solely with the merchandise warehousing industry for not telling the world what to expect from the public warehouse.

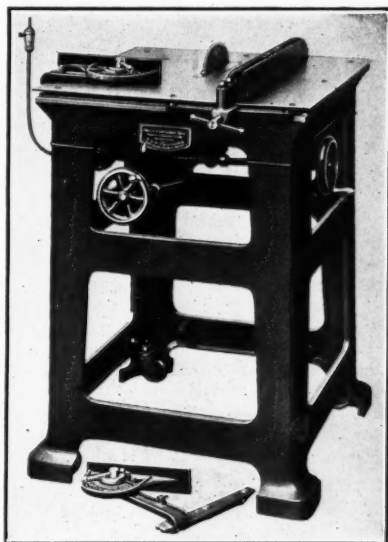
The individual warehouseman cannot afford either the time or the cost of educating "the big prospects"; the officers of the association are cumbered with more pressing duties in line with holding their organizations together for efficient working; the "chains" and similar associated warehouses are buried under an avalanche of "leads" to be followed through for member-warehouses.

No agency exists, within the industry, to give us "some concerted movement to educate the big prospects who cannot be reached by ordinary solicitation for their business."

JUNE lies ahead. With June is ushered in the season of summer association meetings, city and State outings, and other informal gatherings of men who have staked their all on the future of merchandise warehousing.

Is it not possible, out of these gatherings, for some one to assume leadership for some form of "telling the world" of the economies of the public warehouse?

### New Universal Portable Saw for Warehouse Packing Room



A NEW large portable Universal saw which can be used in the shipping room of the warehouse has been put in production by J. D. Wallace & Co., Chicago.

This machine, the company's No. 8, operates from the ordinary electric lighting circuit and can be taken to the job wherever it may be. It can be mounted on rollers and taken to the spot where the goods are being assembled for shipment. The warehouse packing force can take the saw to the job and do the crating at the customer's place.

This is a portable floor type of the Universal circular saw. It combines all the advantages of the portable bench machine and the self-contained floor type.



# Household Goods Warehousing in the United States\*

By CLARENCE A. ASPINWALL

President Security Storage Co., Washington, D. C.

## Chapter VIII

### Control of Insect Pests

(Note: Chapter VIII of Mr. Aspinwall's book comprises two bulletins issued by the United States Department of Agriculture, Washington, D. C.—Ed.)

#### Farmers' Bulletin No. 1353

**T**HE common clothes moths are usually seen flying in darkened corners and just beyond range of the brightest rays of the lamp. They prefer darkness. They are frightened when clothing and other objects are suddenly moved, and are then seen running rapidly or flying to conceal themselves in the creases of clothing, cracks, or other dark places.

**"Harmless Moth Miller Parent of Destructive Worm."**—The moths, or millers, as they are often called, have imperfectly developed mouth parts and could not feed upon fabrics if they desired. Their purpose in life is merely to lay eggs that develop into the worms or larvæ, which alone can cause destruction. Nevertheless, every moth killed helps to reduce infestations by preventing more eggs being laid. The moths lay their eggs in and about clothing and other objects subject to attack. From the eggs are hatched the larvæ or worms. When these become fully grown, they are whitish and about half an inch long. The larvæ spin cocoons in which they transform to the pupa or chrysalis stage, and during this stage the insect changes to the adult, or moth. Only the worm or larva of the clothes moth is capable of destroying fabrics.

**"Common Species of Clothes Moths."**—There are two very common species of clothes moths. They are the case-making clothes moth and the webbing clothes moth. The tapestry moth is less often found, though it may become destructive. (See illustrations on page 46.)

**"Food of Clothes Moths."**—Clothes moths feed upon wool, fur, hair, feathers, and all fabrics manufactured by them. They also relish dried animal matter such as dead insects, including

the dead of their own species, and untreated skins, beef meal, casein, etc. In experimental work clothes moths have thrived best upon a diet of bristles, hair, feathers, fur or raw wool, and not so well upon ordinary woolen cloth used in the making of wearing apparel. Notwithstanding this, the damage they cause to wearing apparel has given them a well-deserved reputation as pests. There may be some satisfaction, however, in knowing that if the death rate among clothes moths feeding upon dyed woolen fabrics was as low as among those feeding upon raw wool, and their growth as rapid as when they feed upon bristles, fur and hair, their capacity for destruction would be increased enormously. When a campaign is waged against clothes moths in the home, it must be remembered that they may be found feeding upon carpets and rugs, stuffing and covering of upholstered furniture, tapestries, stuffed animals or birds, dust brushes, shaving brushes, the felts in pianos, and a long array of articles often little thought of as being fed upon by clothes moths. A single piece of hair-stuffed or feather-stuffed furniture may keep a house well stocked with clothes moths for years. Clothes moths almost never injure household fabrics or wearing apparel in daily or weekly use, or articles that are brushed, cleaned or beaten once or twice a month. Furniture, on the other hand, may be in constant use and still be badly infested.

**"Biology of Clothes Moths."**—It is important in a fight against clothes moths to know something about their biology. Each generation is called a life cycle because the insect keeps passing through a successive round of stages, consisting of the egg, the larva, the pupa, and the moth. The following facts concerning these stages of the life cycle relate particularly to the webbing clothes moths, but must be taken into consideration in any intelligent campaign against clothes moths of other species as well.

**"The Adult or Moth Miller."**—The moth, or 'miller,' which is the adult, seldom lives as long as one month. Moths are

more likely to die between the seventh and fourteenth days after they emerge from the pupa. Apparently they take no nourishment, and the female moths begin laying eggs before they are fully one day old and usually lay eggs each subsequent day of their lives. When a moth stops laying eggs it is a sign that she will die within a day or two. Few moths have been known to lay over 150 eggs, and of this number at least one-half are laid during the first few days of adult life. As many as 59 eggs have been laid during 24 hours by one female moth, but this is an unusual number.

**"The Egg."**—The eggs are laid singly or in groups of as many as 25, either loosely upon or between folds of fabrics. In loosely woven goods, such as yarns, carpets and rugs with heavy nap, or heavy woolen clothes, the eggs are placed down in the meshes of the fabric, where they are held by the fine threads as illustrated on page 45. On certain closely woven serges they are laid so loosely upon the surface that they can be shaken off. In furs, the female moth may burrow down among the hairs to the skin itself in order to find a sheltered place for her eggs. The eggs are not as large as the head of a common pin, but, small as they are, their white color makes it possible to see them without the aid of a magnifying glass, if they are laid upon a dark or black substance. They are very fragile and easily crushed.

"Clothes-moth eggs hatch most readily in warm summer weather in from four to eight days. During colder weather hatching may not take place for three weeks. In steam-heated buildings hatching does not require a much longer time than that taking place in warm summer weather.

**"The Larva."**—Of all the stages, the larva or worm stage—the only stage in which clothes moths damage fabrics—is the most susceptible to outside influences upon its growth. The nature of its food, the temperature, and the humidity have pronounced effects. Sometimes, for no apparent reason, the larva may pass into

a period of dormancy lasting as long as 8 to 10 months, during which it will neither feed nor move about appreciably, only later to become active, feed and continue its growth.

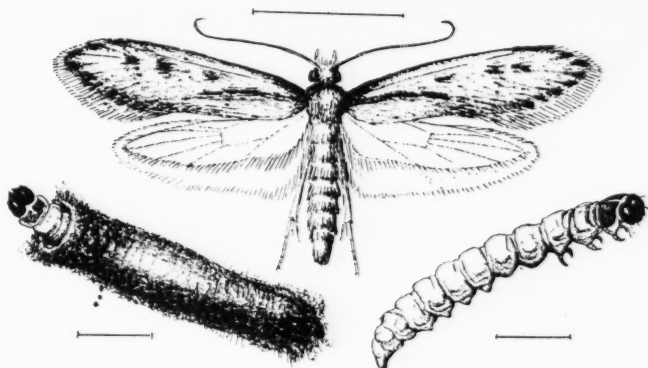
"When first hatched the larva is white, as when full grown, and is scarcely one-sixteenth of an inch long. When young it is so transparent that the color of its food shows through its alimentary canal as a line extending along the center of the body. When full-grown it may be half an inch long, although its size will vary with its environment and food supply. It is not possible to judge the age of a larva by its size. Some larvæ at 15 months of age are very much smaller than others only two months old. The shortest definite record for larval development known is 104 days during warm summer weather at Washington, D. C.

"Many larvæ hatching during the summer do not become fully grown and mature as moths until the following March, April and May. There even is a considerable variation in the length of time larvæ of the same brood require for development. Larvæ hatched on the same day may require as few as 15 weeks or as long as two years. Much depends upon their food and environment.

"*The Pupa or Chrysalis.*—The pupa or chrysalis stage lasts during warm summer weather about eight days. During the winter months from January to March, in a steam-heated building, clothes moths remained in the pupa stage three to four weeks.

"*Season History.*—While moths may be on the wing in steam-heated buildings during almost any month, they are present in greatest abundance the country over from May or July and during September and October. In steam-heated houses moths of the webbing species

Case - making clothes moth. Above, adult; at right, larva; at left, larva in case. Enlarged



have been observed as early as late December, January and February. In northern localities, where only the case-making moth is present, and in houses not continuously heated, the moths are singlebrooded and appear during late May, June and July. The late appearance of moths in such northern houses is greatly to the advantage of the housewife, for by June winter clothing can be stored where it is protected from moth eggs.

While it is true that wearing apparel is not damaged by clothes moths if in daily or weekly use, the occasional appearance of moths in steam-heated houses in late winter makes it clear that moth eggs may be laid on susceptible articles at any time they are not in use, and that if laid away without precautionary measures being taken to safeguard them they may be quite unexpectedly damaged in storage.

"The department suggests the following remedies:

"The remedies here listed for the killing of fabric pests, or for protection

against them, have been thoroughly tested and are in general use by the public. They can be recommended without reservation if used with an intelligent understanding of their good or bad features and in accordance with directions.

"(1) Constant watchfulness. This must be the watchword for successful control. No treatment known to kill clothes moths already in fabrics will have any lasting effect in keeping other clothes moths from infesting the fabrics later if they are left exposed about the house. There is no treatment known that is practical that will render wearing apparel absolutely immune to attack.

"(2) Thorough brushing, beating, and, if possible, sunning fabrics before any treatment is applied. These are important under all circumstances.

"(3) Careful wrapping in unbroken paper.

"(4) Naphthalene. Very effective in the form of flakes or moth balls for protecting clothing in closets, trunks and tight chests.

"(5) Paradichlorobenzene. Equal in effectiveness to naphthalene and used in the same manner.

"(6) Camphor. For use in tight chests and trunks, but not as good as Nos. 4 and 5.

"(7) Pyrethrum powder. Not as good as Nos. 4, 5 and 6.

"(8) Cold storage. Rather expensive, but a certain method of protection against clothes-moth injury during the period of storage.

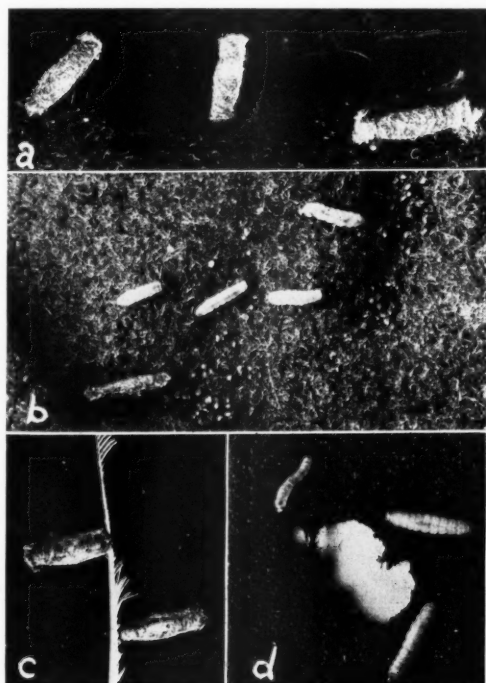
"(9) Hydrocyanic-acid gas. Excellent for fumigating entire houses or single tightly sealed rooms, but dangerous except when applied by an expert or careful and well-informed person.

"(10) Sulphur fumes. Sulphur fumes generated by burning sulphur candles, purchased at drug stores. Likely to bleach wall paper and fabrics and will tarnish metals.

"(11) Carbon bisulphid. Excellent for fumigation of closets which can be tightly sealed, trunks, chests and other tight containers. The gas is inflammable.

"(12) Carbon tetrachlorid. Excellent for fumigation of single rooms, closets, trunks, chests and other tight containers.

"(13) Cedar chests. Excellent for protecting clothing if used according to directions.



Case - making clothes moth. a, three cases nearly twice natural size; b, larvæ removed from cases, and pellets of excrement; c, cases attached to damaged feather, about one and one-third times natural size; d, characteristic damage by larvæ to cloth



Webbing clothes moth. Adults or moths above and larvæ or worms below.  
Buttons are nine-sixteenths of an inch in diameter

"(14) Dry heat. Dependable if it can be applied.

"(15) Hot water.

"(16) Soap solution.

"(17) Treatment of cracks and hiding places with gasoline, benzine and kerosene.

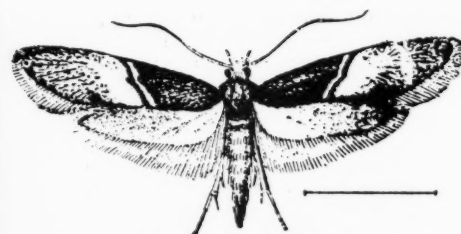
"(18) Dry cleaning.

"*Brushing, Beating and Sunning.*—Too much emphasis cannot be placed on the value of frequent brushing, beating, sunning and cleaning of articles subject to clothes-moth attack. The eggs of clothes moths are delicate and can usually be crushed or dislodged by brushing and beating. Pay special attention to crevices, seams and pockets. Sunning is a valuable aid in control work. In articles laid away moths are much more likely to concentrate upon soiled spots if these have not been removed. Brushing and beating usually remove or kill the larvæ or worms. If clothing is thoroughly brushed every two weeks, it is doubtful if moths can affect it seriously. Carpets and rugs cleaned by strong vacuum cleaners and thoroughly brushed on both sides, or electrically cleaned, are freed from infestation if the work is properly done. Clothing dry-cleaned is also freed from infestation by the process. Once freed from infestation, clothes should be protected, if they are not to be used during the warm season, by being wrapped in paper or placed in tight chests or treated closets.

"*Careful Wrapping in Unbroken Paper.*—The public is familiar with 'moth-proof' paper bags of various types that appear upon the market each summer. These paper bags for the storage of suits and coats are made of heavy paper, paper impregnated with tar, or other substances for which much is claimed. These bags if not torn and if properly used are excellent for keeping moths from reaching clothing. They are of no value in killing moths that may be in the clothing when it is placed in the bag, and those made of plain paper are just as good as those containing tar.

"The value of such bags as protectors against infestation ceases largely as soon as they are torn, even slightly, or are left unsealed. Frequently clothing on coat hangers is placed in bags with the hook of the hanger protruding from the bag so that the clothing and bag may be hung in the closet. Unless special attention is given to this method of hanging, the paper bag is not carefully sealed about the hanger, and spaces of one-fourth inch or more are left open. Moths have no difficulty in crawling into such openings, and if they find them the bags are useless.

"Ordinary firm wrapping paper is satisfactory, or several thicknesses of newspapers will serve. Clothes moths do not eat into paper to reach clothing. For this reason, if woollens and other fabrics subject to moth attack are cleaned and freed from moths by any of the methods mentioned above, they will remain safe if wrapped at once and tightly in several thicknesses of firm wrapping paper or in newspapers. There is a general belief that the print on newspapers keeps moths away. This is not true. Any pa-



Tapestry moth. Adult. Enlarged

per of moderate thickness and unbroken will protect clothing. Care must be exercised to bend back the folds of the paper upon themselves at the ends of the bundles so that the moths cannot crawl into the bundles at the ends. Hats and other articles that will be damaged by tight wrapping can be protected by placing them in ordinary unbroken cardboard boxes, hat boxes, etc., and then sealing the covers of the boxes with gummed paper.

"After clothing has been made into bundles or sealed in boxes, these bundles and boxes may be left exposed in garrets or on storeroom shelves without danger of infestation from without. If flake naphthalene is wrapped among the folds of clothing made into bundles, any small larvæ that may have got into the cloth before it was wrapped will be killed.

"*Naphthalene.*—Naphthalene, in the form of 'flakes' or 'moth balls,' commonly for sale at drug stores, is a well-known substance. Naphthalene in good condition is one of the safest and best materials for protecting fabrics against moth injury. To get definite results it must be used in tight chests, trunks, or other containers where the fumes given off by the slow evaporation of the crystals will be confined. If used in bureau drawers, in closets frequently opened, in pockets of clothing hung in closets, or in boxes which permit the fumes to escape, naphthalene is only partly effective and cannot be depended upon for absolute protection. Naphthalene can be purchased of chemical firms in tin cans containing from 1 to 10 pounds or more, and if so purchased one is sure of getting good material if dealing with a dependable firm. The fumes of naphthalene will not



Eggs of webbing clothes moth. At a and c, laid among the threads of a loosely woven cloth; at b, laid upon a closely woven broadcloth.  
Greatly magnified



injure man, as he is ordinarily subjected to them. Naphthalene flakes and balls cost from about 15 to 20 cents a pound.

"Naphthalene should be used at the rate of about 1 pound to each 6 to 10 cubic feet of space. One pound of good naphthalene flakes scattered between the folds of clothing in a trunk of average size should kill all stages of clothes moths. In tight chests of ordinary size the fumes given off by the slow evaporation of 1 pound of naphthalene will kill both young and well-grown larvæ of clothes moths and prevent moth eggs from hatching. If the good grade of naphthalene is used in tight containers there is no doubt as to the efficiency of naphthalene fumes. Too many persons expect naphthalene scattered about closet shelves or bureau drawers to be effective. It is not entirely so under such circumstances. If chests or trunks are not very tight much can be done toward making them so by sealing the cracks with adhesive paper or by papering them on the inside. If there is opportunity for the fumes to escape, use from 2 to 3 pounds of naphthalene to each 6 to 10 cubic feet of space.

"*Paradichlorobenzene*.—Paradichlorobenzene is a white crystalline substance which vaporizes slowly at ordinary temperatures, forming a gas apparently heavier than air. This gas is nonpoisonous to man, but poisonous to clothes moths and other fabric pests when they are exposed to it in tight containers. The fumes do not injure fabrics. Paradichlorobenzene is similar in general appearance to naphthalene flakes. It can be purchased in tin cans containing from 1 to 10 pounds, from drug stores or direct from the manufacturing chemists, at a cost of from 15 to 45 cents per pound, according to the quantity purchased. It appears to be quite as effective as naphthalene when used in accordance with directions for the use of naphthalene, and in the same amounts. It is a relatively new remedy which bids fair to become as well known in moth control as naphthalene.

"*Camphor*.—Gum camphor is used in the manner recommended for naphthalene and paradichlorobenzene, but is less effective than naphthalene. If of good quality and used at the rate of from one-half to 1 pound to each 5 cubic feet of space in tight containers, gum camphor will protect. All stages of clothes moths are killed by the fumes given off by the camphor; hence camphor, to be most effective, should be broken into small pieces and used in tight containers which will confine the fumes. While gum camphor does kill some eggs and larvæ when sprinkled in small pieces upon infested cloth in open containers such as bureau drawers, pockets in clothing, etc., it is not to be depended upon except where the fumes given off by evaporation can be closely confined with the clothing to be protected.

"*Pyrethrum Powder*.—Pyrethrum powder, if fresh, will kill clothes-moth larvæ. Clothing should be thoroughly dusted with the powder and placed in a tight container such as a chest or trunk, or wrapped well in unbroken paper. Pyre-



Trunk ready for treatment with carbon disulphid or carbon tetrachlorid. On the clothing are shown two saucers. In the one to the left stands a one-pound tin can of carbon disulphid; in the one to the right a glass bottle filled with the colorless carbon tetrachlorid. For the fumigation of a trunk 21 by 20 by 42 inches, pour about 3 tablespoonfuls of carbon disulphid liquid into the saucer and close and seal the trunk. If carbon tetrachlorid is used, pour at least 6 to 10 tablespoonfuls of liquid into a saucer, close, and seal. The liquid evaporates, forming a gas heavier than air that sinks down into the clothing and kills clothes moths and other insects

thrum powder soon loses its protective value on exposure to air, hence is not considered particularly effective for long storage, and is inferior to naphthalene or paradichlorobenzene. It is not always easy to obtain fresh pyrethrum powder at stores.

"*Cold Storage*." [Note: This subject is covered in Chapter XIV, to be published in a later issue of *Distribution and Warehousing*.]

"*Fumigation of Entire Establishment with Hydrocyanic-Acid Gas or Sulphur Fumes*.—In large houses with many carpets or rugs, much upholstered furniture, and other fabric furnishing, and in tourist hotels and houses used only during the winter months but closed through the long, hot summer season, fabric pests may become very abundant and so generally established that they cannot be reached easily by the more local treatments recommended further on. In such establishments insects may not only be secreted in the affected furnishings, but may be upon the walls, in floor cracks, behind mop-boards, and in other places where they have crawled for protection or for transformation. The removal of furnishings and their treatment outside the establishment, or in special rooms, will remove at the same time most of the infestation, yet enough insects may be left behind to restock the furnishings when they are returned after treatment. For this reason, any control measure that can be applied to the house or hotel

with the furnishings left as they are normally has its advantage. Exception should be made in case of chests or other tightly packed containers. Clothing, blankets, and other contents of such containers should be removed and hung up in rooms or variously spread out over furniture, etc., so that fumes can more readily reach the larvæ in them. This need not be done if the containers are treated as separate units as hereinafter suggested. It may be well to raise rugs or carpets so that the gas can more easily reach the underside, though this is not always necessary or feasible. The tops of pianos and organs (upon the felts of which the moths and carpet beetles may be feeding) should be raised, and all closet doors, bureau drawers, trunks, etc., should be left partially open.

"Fumigation by two methods can be used for the treatment of houses or hotels as a single unit—namely, with hydrocyanic-acid gas and with sulphur fumes. Formaldehyde fumigation is worthless for control of clothes moths or other fabric pests, notwithstanding general belief. It is a good disinfectant for use after contagious diseases, but should never be employed for controlling fabric pests.

"*Hydrocyanic-Acid Gas*.—Fumigation with hydrocyanic-acid gas is the best known method of controlling fabric pests as well as other household pests, including the bedbug. It kills speedily and effectively. The gas is formed by the

union of sulphuric acid, sodium cyanid or potassium cyanid, and water. It is colorless, lighter than air, with a distinct odor, and when mixed with air in the proportion occurring during fumigation is noninflammable. It is not injurious to the most delicate fabric or dyes, or to any house furnishing, and does not tarnish silver, brass, or other house metals. When the house is ventilated, the gas quickly escapes skyward, and houses usually can be ventilated so that they may be occupied within 1 or 2 hours time, often within 30 minutes. Sleeping quarters at hospitals, and private homes, can be fumigated during the day and ventilated so that they can be safely occupied the same night.

"Hydrocyanic-acid gas is deadly to humans if breathed in concentrated form, and should be used only by an intelligent, careful, and well-informed person who understands the element of danger as well as the excellent features of the gas. Hydrocyanic-acid gas should not be used in an apartment house, office building, or city block of houses unless neighboring parties are notified and are ready to vacate if necessary during the period of fumigation. Hydrocyanic-acid gas fumigation costs approximately 35 to 50 cents for each 1000 cu. ft. of space fumigated. The house may be left exposed to the action of the gas for from 4 to 24 hours. Hydrocyanic-acid gas fumigation is being employed in flour mills, warehouses, leading hospitals, schools and colleges, as well as in private homes. For information on the method of fumigating with hydrocyanic-acid gas write to the United States Department of Agriculture at Washington, D. C., for Farmers' Bulletin 699.

"Sulphur Fumes.—Fumigation with sulphur fumes is a remedy well known to the public. Sulphur fumes will kill clothes moths, but must be used at the rate of about 13½ ounces of sulphur to each 1000 cubic feet of space. Fumigation should continue for a period ranging from 18 to 24 hours. Remember that there is some danger of fire in the careless use of sulphur candles; also that sulphur fumes may have a bleaching effect upon delicate fabrics and wall paper, and that they tarnish metals. The greater the atmospheric moisture the greater the bleaching effect. The Department of Agriculture does not recommend the use of sulphur fumes in homes equipped with valuable furnishings. Very often, however, the use of sulphur candles offers a most welcome method of moth control, because of the availability of sulphur candles at drug stores. Naturally where fumes are used rooms or houses must be tightly closed and more rather than fewer of the sulphur candles used. Failure with sulphur candles often is the result of dependence upon one or two improperly burned candles to do the work of the recommended 13½ ounces of sulphur for each 1000 cu. ft. of space to be fumigated. Directions for burning sulphur candles usually are supplied by the manufacturer or the dealer.

"Carbon Disulphid Fumigation.—Carbon disulphid is an excellent fumigant for single rooms, closets, trunks (see illustration on page 47, chests, and other tight containers. It is sometimes called "high-life," and can be purchased at drug stores or from wholesale chemical firms as a liquid put up in tin cans of 1, 2, 5, 10, or more pounds capacity at a cost of from about 6 to 35 cents a pound, according to the quantity used. It is a colorless liquid that looks like water, but weighs about 10 lb. to the gallon. When exposed to the air it evaporates quickly, producing a foul-smelling gas about two and three-fourths times as heavy as air. While the liquid is not explosive or inflammable, the gas formed upon evaporation is. Because of this inflammable nature of the gas it must be kept away from fire in any form. The gas can be detected easily by its foul odor, but this odor disappears after thorough ventilation of rooms and fumigated articles. If used carefully and intelligently as directed in the proper amounts carbon disulphid speedily and surely kills fabric pests in tight containers. It is not recommended for the fumigation of entire buildings because of the fire hazard when so great a volume of gas is formed, although experienced persons can use it safely for the fumigation of detached houses if they can control surrounding conditions.

When used in small amounts about houses in accordance with directions, there is but little more danger than in the use of gasoline or benzine, with which the public is more familiar. For complete information regarding carbon disulphid and its use, write to the United States Department of Agriculture for Farmers' Bulletin 799.

"Fumigation with carbon disulphid is not effective at temperatures below 65 deg. Fahr. Better results follow where the temperature is above 70 deg. F. In rooms and closets or in well-built trunks, the evaporation from 4 to 6 lb. of the liquid to each 1000 cu. ft. of space should kill all moths and their larvae. If the walls are plastered, or plastered and papered, the floors tight, and the doors sealed after fumigation begins, 4 lb. of carbon disulphid should prove sufficient to kill fabric pests. More liquid, even as much as 20 lb. per 1000 cu. ft. of space, may be required in more loosely constructed containers.

"Assuming that 4 lb. of carbon disulphid will be used to each 1000 cu. ft. of space, the following rough calculations may be useful in determining how much liquid is needed for various containers:

QUANTITIES OF CARBON DISULPHID NEEDED  
FOR FUMIGATION

Space to be fumigated	Quantity needed
Room, 12 by 10 by 8 feet	4 pounds or 3¼ pints.
Closet, 3 by 8 by 8 feet	1½ pints.
Closet, 2 by 5 by 7 feet	¾ cup.
Closet, 4 by 5 by 7 feet	1½ cups.
Trunk, 21 by 20 by 42 inches	3 tablespoonfuls.
Box, 1 by 2 by 2 feet	1 tablespoonful.

"Note that the method of application,

as indicated in the illustration takes into consideration the fact that the gas formed is about two and three-fourths times as heavy as air. The liquid must therefore be exposed on top of the article to be fumigated.

"Carbon Tetrachlorid Fumigation.—Carbon tetrachlorid is a good fumigant for single rooms, closets, trunks, chests, and other tight containers. It is a thin, transparent, colorless liquid, in appearance similar to water, that evaporates on exposure to air, forming a gas with a pungent, aromatic odor. It is like carbon disulphid in that its gas is heavier than air. When carbon tetrachlorid is used at the same rate as carbon disulphid, it is about one-half or one-third as effective. It has the great advantage over carbon disulphid that its gas is neither explosive nor inflammable, hence there is no fire risk in its use. Carbon tetrachlorid is purchased at drug stores or from chemical firms in cans containing 1 or more lb. of liquid, and costs 10½ to 30 cents a pound, according to the quantity purchased. It should be used at the rate of 8 to 12 lb., or more, per 1000 cu. ft. of space if containers are very tight. When the temperature is 70 deg. Fahr. or above, good results in killing clothes moths should follow if the quantities given above for carbon disulphid for the respective spaces are trebled. Since the gas is heavier than air, the liquid should be exposed in shallow dishes at the top of the container to be fumigated.

"Dry Heat.—Heat is now recognized as an effective agent in killing insects. All fabric pests will be killed in a very short time if rooms can be heated to a temperature of 130 deg. F. long enough to permit all articles in the room to be thoroughly heated through to this temperature. Experimental work has demonstrated that even lower temperatures will kill the larvae of clothes moths. All larvae exposed in an incubator to 128 deg., 120 deg., and 110 deg. F. died in 6, 11, and 31 minutes, respectively. At 105 deg. F. 20 per cent were dead at the end of 31 minutes, while at 110 deg. F. 30 per cent were dead at the end of 11 minutes. The killing power of heat can be readily utilized by ironing fabrics with very hot irons, or exposing them in superheated rooms before they are put away for the summer.

"The rays of the sun in summer can often be used to kill or drive clothes moths from fabrics. Thus clothes-moth eggs on flannel, exposed to the bright sun at 128 deg., 125 deg., 120 deg., and 110 deg. F., were killed at the end of 6, 6, 11, and 31 minutes, respectively. Exposure to the sun at 110 deg. and 105 deg. F. for 31 and 11 minutes, respectively, did not kill the eggs. Well grown larvae of clothes moths in garments exposed for several hours to the hottest rays of the sun usually become restless and spin down from the garment. The old-time custom of sunning clothing to kill moths is based upon excellent experience.

"Impractical or Worthless Remedies.—Below are listed certain worthless remedies, besides others not recommended

ed to the housewife because of difficulty of application, partial effectiveness, impracticability, or lack of full information regarding their value.

#### Worthless Substances

"The following substances often recommended for clothes-moth control are worthless:

- "Tobacco extracts containing nicotine and tobacco powder when used at reasonable strengths.
- "Lavender flowers (scattered on).
- "Cayenne pepper.
- "Allspice (dusted).
- "Angelica root (dusted).
- "Black pepper.
- "Pyrethrum stems (dusted).
- "Lime, air-slaked (dusted).
- "Powdered sulphur (dusted).
- "Borax (dusted).
- "Quassia chips (dusted).
- "Colocynthis pulp (dusted).
- "Eucalyptus leaves (dusted).
- "Hellebore, white (dusted).
- "Formaldehyde (sprayed 1 to 10).
- "Sodium bicarbonate (dusted).

- "Sodium carbonate (dusted).
- "Lead carbonate (dusted).
- "Lead oxid (dusted).
- "Red cedar leaves (dried and placed in clothing).

#### Impractical Remedies

"The following substances have considerable value if fresh or properly used, but they are impractical for one or more reasons and are not recommended, especially as among the remedies that can be recommended very highly there are a number that are easily within the reach of all.

"*Cedar Chips and Cedar Shavings.*—Ordinarily only partially effective, and never effective against adults or the half-grown to full-grown larvæ of clothes moths and carpet beetles. They soon lose their value and often become valueless before they are purchased by the retailer. Since the average purchaser of

cedar chips and shavings has no certain method of determining their strength it is better not to depend upon them than to secure weak material and suffer loss from moths.

"*Gasoline.*—Gasoline sprayed on flannel killed clothes-moth eggs. Dipping clothing in gasoline will kill clothes moths, and articles so dipped and coming direct from the dry-cleaning process may be considered freed, temporarily at least, from moth infestation. Of course as soon as garments are dried after treatment they are subject to reinfestation. The use of gasoline for the treatment of wearing apparel most subject to moth attack is not advised for the average home because of the dangers and difficulties of application."

(The concluding part of Chapter VIII of Mr. Aspinwall's book will appear in the July issue.)

## New Stabilizer and Coupling Lock Improve "Tracking" Qualities of Trailers

MANUFACTURERS of commercial trailers are giving careful attention to the perfection of devices which correct tendencies to "snake" and "whip," especially when the trailer is being drawn at the speeds demanded in the interests of economical hauling.

The Detroit Trailer & Machine Co. has just applied for patents on a "stabilizer" for 4-wheel trailers on the knuckle axle type. This is a simple but ingenious mechanism which, the manufacturers claim, will hold the trailer absolutely true to the road and make it follow exactly in the wheel tracks of the towing motor vehicle. It is invented by J. F. Higbee, manager and chief engineer of the Detroit company, and has been tested by practical use under every conceivable condition before being put on the market.

Trailer experts have long realized that the tendency of the knuckle axle type was due to loose connections in the steering mechanisms all the way down the line from the truck to the axle knuckle. In the standard machine of this same type there are eight points where looseness occurs, due to wear, and, while any one point may not show so very much movement due to this wear, the combined total of all of them may prove very serious. In developing the stabilizer the principal object was to compensate for this wear and lost motion. In a word, the Detroit stabilizer provides an arrangement which eliminates all of this wear which occurs beyond its point of installation.

#### How Stabilizer Works

The device is in the form of a half circle, supported across the springs back of the steering mechanism, with a direct connection to the drag link connecting to the axle knuckle. Located centrally in this circular piece is a "V" groove in which the roller, which is mounted in the back steering arm proper, seats itself when going straight ahead. This roller is mounted in a plunger with a strong spring back of it which, when going

straight ahead, holds it firmly in place, regardless of any lost motion in the steering mechanism beyond this point. While it requires only about a 15-lb pull to roll this roller out of the "V" slot, it holds it so rigidly in place that experiments have shown that it is possible to connect a trailer behind a truck with a rope or chain and go straight ahead at high speed and the trailer will run in a perfect line.

In turning corners, the new stabilizer has a tendency to cause the trailer to cut out rather than to cut in in making the turn. The advantage of this is apparent. When the truck wants to turn the trailer is inclined to want to go straight ahead until after it has taken up all the lost motion, and the roller rides out of the "V" slot; then the trailer makes the turn in the regular way.

Speaking of this stabilizer as a safety factor, Mr. Higbee says:

"We know of one instance where the trailer became disconnected from the truck in the congested section of the downtown district and, instead of running wild, this arrangement held the wheels firmly enough so that the trailer followed straight ahead right back of the truck. We also note that it has cut down the service on trailers in the way of repairs very considerably, as, prior to the use of this arrangement, when the parts became slightly worn and the trailer began to nose, it was necessary to re-bush all the steering parts in order to eliminate this trouble. With this stabilizer, steering mechanism may become worn very much, yet the trailer will run true and track perfectly."

The stabilizer has been so arranged that it would go on any of the older makes of this type of trailer and can be installed in a couple of hours' time.

Another new device recently perfected by the Detroit company is a coupling lock for use on its 4-wheel reversible trailers of the circle steering type.

"It has been our experience in the past," says Mr. Higbee, "that the small square pin usually used for locking the

sub-frame to the main frame was a more or less frail affair, which had the possibility of becoming disengaged from the road vibrations; also it allowed a considerable play in the sub-frame on account of its construction as it was usually only supported in a small pocket at the top and bottom. It is our belief that, to make a trailer run true, this sub-frame should be perfectly stationary with the main frame. To accomplish this we have provided a locking mechanism which, when engaged in place, combines these two units as one.

#### Other Features

"Almost invariably where municipalities or fleet owners are buying trailers they require that they be made interchangeable with other makes of trailers in the way of a connection between two or more trailers for hauling in trains. We have provided a towing attachment on each end of our Model "L" trailer which is ingeniously combined with the locking mechanism. This is so arranged that, when the draw bar is connected on the front end, the lock and attachment folds back and automatically locks itself out of the way, preventing any possibility of its getting back out of place. This attachment is the standard size of pintle hook and allows for the connection of any make of trailer to be pulled behind it.

"In the manufacture of trailers, particularly of the circle type, even though all parts may be jig-drilled, it will be found that the axles do not always set parallel to each other, which would cause a misalignment of the wheels. This misalignment is not great, although in many instances it is enough to cause a trailer to pull hard and also cause the rear wheels not to track with the front wheels; and to provide for this condition, in the upper part of our locking mechanism we have arranged small washers which may be taken out of one side and placed on the other, or *vice versa*, in order that the wheels may be made perfectly in line."



# The Effect of Knots on the Strength of Bracing for Carload Freight

By R. P. A. JOHNSON

Engineer in Forest Products, U. S. Forest Products Laboratory, Madison, Wis.

**D**O you remember struggling with a rigamarole something like this back in your grade-school days: "For want of a nail, the shoe was lost; for want of a shoe, the horse was lost; for want of a horse, the rider was lost," etc.—all for want of a little care about a horseshoe nail?"

Whether you remember it or not, the same lesson applies exactly to the bracing used for car freight. The lack of a little care in placing it may result in a damaged claim, a dissatisfied customer, a lawsuit, and other disagreeable consequences if we care to follow the old story to the end. It is evident that all the rider had to do was to replace the lost nail, and there would have been no tragedy. Since it may not be so evident what a shipper or railroad man should do with a piece of bracing in order to avoid trouble, it will be well to point out how a little care with a piece of bracing will materially increase its efficiency.

A piece of car bracing has no definite, fixed amount of strength regardless of how it is used. Its strength and the service it is good for depend largely on how it is placed with reference to the knots it contains.

In order to know how to place bracing with reference to knots, we must first see how a knot injures the strength of beams. If we test the wood of a knot, we find it harder, stronger and heavier than the surrounding wood. We might, therefore, expect it to be an asset to strength, yet we know that it is a liability. Why? The answer is not far to seek, because one of the most prominent characteristics of wood is its difference in strength lengthwise of the grain and across the grain.

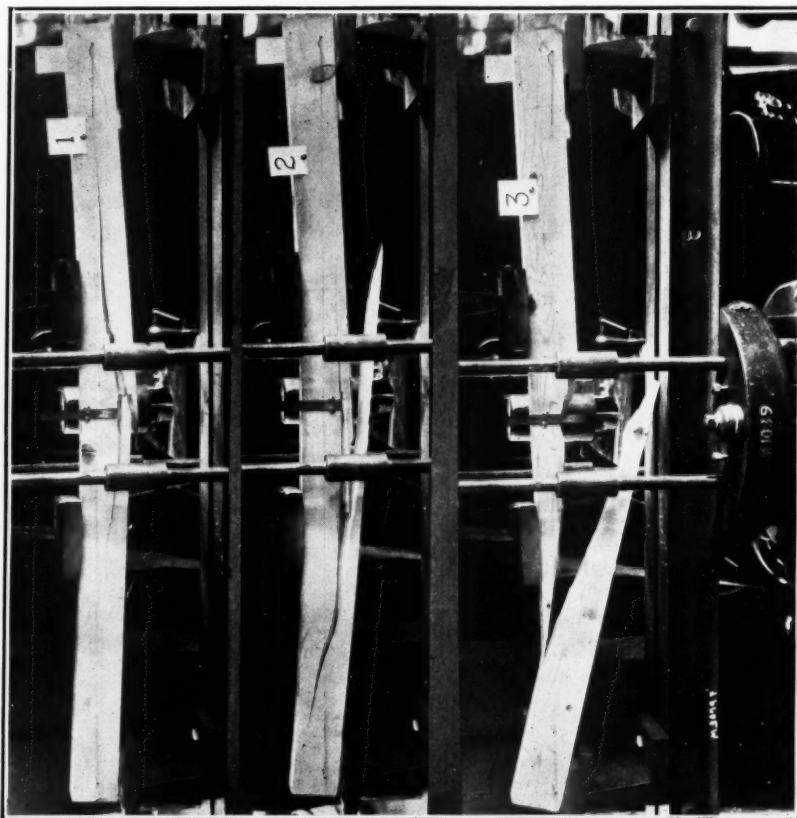
In tension, wood is from twenty-five to fifty times as strong in the direction of the grain as across it, depending on whether it is green or dry. In compression, wood is about ten times as strong with the grain as across it. Let us see how this characteristic of wood explains the injurious effects of knots on the strength of a beam when used as a car brace or for any other purpose.

A knot is formed by wood fibers of the main body of the tree running out into a limb, and the other fibers develop cross grain in passing around the knot. Consequently, forces acting along the grain of the main body of the beam act across the grain of the wood in and surrounding the knots.

Now, when a load comes against a brace, tending to throw it into a bow shape, the side of the brace away from the load is stretched, or thrown into tension along the grain, while the side next to the load is shortened, or compressed along the grain. That is practically the whole story of the bending of a beam. Thus the lengthwise tension and compression of the brace act on the wood of a knot in its weakest direction—that is, across the grain. Even the strength which wood has across the grain is practically destroyed in knots by the checking which almost invariably accompanies drying.

This is illustrated in the picture of the knot in Fig. 1.

Consider the piece illustrated in the picture to be loaded at the top as indicated, and supported at the two ends. The top of the beam will be shortened or compressed and the bottom stretched or under tension. The relative direction of the forces set up inside the piece are shown by arrows. Note that the forces are acting along the grain, or in the strong direction of the wood, in the main part of the beam, and almost directly across the grain, or in the weak direction of the wood, in and around the knot. We see, therefore, that the cross-grain



Illustrating lumber strength as worked out by tests at the Forest Products Laboratory in Madison, Wis. The clear beam, in the center, did not break until a pressure of 2480 pounds had been exerted. The beams at left and right, each containing knots, broke at respective pressures of 1670 and 1030 pounds

in and surrounding a knot is what causes injury to the breaking strength of a beam, and as the difference in strength along and across the grain is so much greater in tension than in compression, knots on the tension side are about twice as injurious as they would be on the upper or compression side. Therefore, turn the knotty face of a car brace *toward* the load and not away from it.

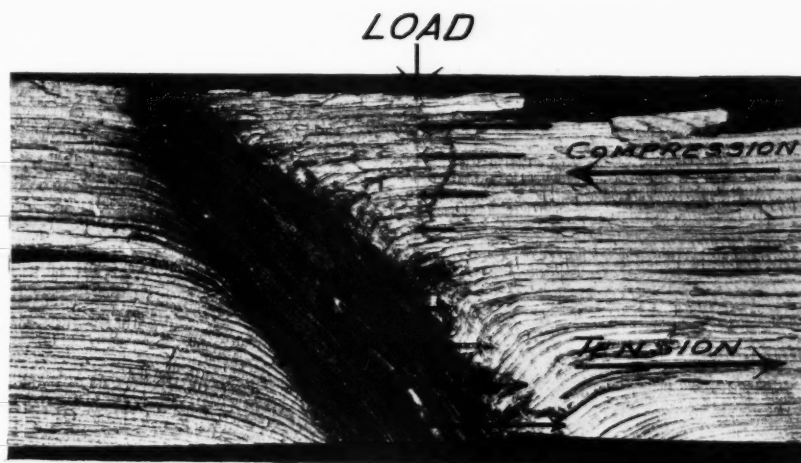
#### A Practical Test

"It sounds good, but it is all theory," you may say. Now, suppose we subject it to a practical test as was done before a group of claim agents of the American Railway Association at the Forest Products Laboratory.

Three 2 by 4's were cut from the same plank, one clear and two with knots of about the same size on the edges. One was tested with the knot on the compression face and one with knot on the tension face, and the results compared with those of the clear specimen. Each piece was put into a testing machine, as shown in the picture on the opposite page, with its ends supported and the load applied on the upper face through the I-beam and pressure blocks shown.

The beam with the knot on *top* broke at a load of 1670 pounds and is numbered 1 in the photograph.

The beam with the knot on the *bottom* broke at 1030 pounds and is numbered 3.



How knots injure the strength of beams. Showing cross grain in and around a knot

The clear beam broke at 2430 pounds and is numbered 2.

So the knot on the top or compression face caused the beam to break under 760 pounds less load than was carried by the clear beam, while the knot on the bottom or tension face caused the beam to break at 1430 pounds less load than the clear beam carried.

That is, the loss in strength from the knot on the bottom or tension face was

approximately twice that from the knot on the top or compression face, as our theory stated would be the case.

The theory of the influence of knots on the breaking strength of beams is based on the results of many tests made at the Forest Products Laboratory, and the three special tests shown in the photographs were only to demonstrate the practical application of the principle.

## Freight Hauling Broke All Records During First Eighteen Weeks of 1926

AMERICAN railroads during the first eighteen weeks of this year—that is, from Jan. 1 to May 1, inclusive—handled 16,777,076 cars loaded with revenue freight, the car service division of the American Railway Association announced in Washington on May 11.

This is the heaviest freight traffic, so far as loading of revenue freight is concerned, that has ever been moved by the rail carriers during any corresponding period, exceeding the same period last year by 283,764 cars, or 1.7 per cent, and the same period in 1924 by 777,285 cars, or 4.9 per cent.

The number of cars loaded with revenue freight during the first eighteen weeks this year exceeded by 221,500 cars, or 1.3 per cent, the estimate made early in March by the car service division as to what the freight traffic would be for that period. At that time it was estimated that total loadings would amount to 16,555,576 cars.

Loading of revenue freight for the week ended on May 1, according to reports filed by the carriers with the car service division, totaled 995,641 cars, an increase of 11,568 cars over the same week last year and 82,091 cars above the same week two years ago. The total for the week of May 1 also was an increase of 22,337 cars above the preceding week this year.

Miscellaneous freight loading for the week of May 1 totaled 386,132 cars, an increase of 17,302 cars over the week before and 27,502 cars above the same week in 1925. It also was an increase of 53,797 cars above the same week in 1924.

Loading of grain and grain products amounted to 38,016 cars, a decrease of 394 cars below the week before, but an increase of 1948 cars over the same week in 1925. It was, however, a decrease of 5352 cars below the same week in 1924. In the western districts alone grain and grain products loading totaled 23,126 cars, an increase of 4169 cars over the corresponding week last year.

Loading of merchandise and less than carload lot freight for the week amounted to 263,465 cars, a decrease of 739 cars under the week before but 3002 cars above the same week in 1925. Compared with the corresponding period in 1924 it also was an increase of 13,692 cars.

Coal loading totaled 165,627 cars, a decrease of 959 cars under the week before, but 14,873 cars above the same week in 1925. Compared with the same week in 1924, it also was an increase of 38,439 cars. Live stock loading for the week amounted to 31,856 cars, an increase of 1462 cars over the week before and 1306 cars over the same week in 1925. It was, however, a decrease of

211 cars below the same week in 1924. In the western districts alone 25,002 cars were loaded with live stock during the week, 1287 cars above the same week last year.

Forest products loading totaled 77,363 cars, 133 cars below the week before and 1075 cars below the same week in 1925. It was, however, an increase of 1795 cars, compared with the same week in 1924. Coke loading totaled 12,122 cars, a decrease of 183 cars under the preceding week, but 2005 cars above the corresponding week in 1925. Compared with the same week in 1924, it also was an increase of 2119 cars.

Ore loading totaled 21,060 cars, an increase of 5981 cars above the preceding week, but 38,083 cars below the corresponding week in 1925 and 22,188 cars below the same week in 1924.

Compared with the preceding week this year, all districts showed increases in the total loading of all commodities, while all except the northwestern showed increases over both the corresponding weeks in 1925 and 1924.

Loadings for the week ended May 1 compare as follows with weeks of this and preceding years:

	1926	1925	1924	1923
May 1.....	995,641	981,711	913,556	961,617
April 24....	973,304	961,186	878,387	962,578
April 17....	964,935	923,844	876,916	958,042
April 10....	929,506	918,400	881,299	947,271
April 3.....	928,092	923,400	862,096	896,375

# Let's Take the Old Family Album Out of Storage!

Success Story No. 3

**Walter Crawford Reid**

*He Did the Thing That Had to Be Done at the Time—Now He's the Industry's "Dean"*



**J**UST doing the thing that had to be done at the time raised Walter C. Reid from an \$8-a-week clerk and general roustabout in a New York warehouse to a position of such prominence that today he is known as "the dean of the household goods warehouse industry." He is the active operating executive of the Lincoln Safe Deposit Co., New York City, which will soon erect a fourteen story furniture storage plant on New York's upper East Side.

Mr. Reid was the son of a New York florist and was, therefore, slated to go into that business; but at an early age he decided to strike out for himself. First of all, he went west, where he hired out to a rancher with whom he stayed until he got so homesick that he decided to work his way back to New York—where he arrived weary and "broke." A brother-in-law connected with the old Carrington Warehouse, on Third Avenue at 28th Street, knew of a vacancy with that concern, so young Reid took it—stumbling, almost accidentally, into what was to prove his life's work.

The young man was engaged as a "bookkeeper," but he had a few additional duties—such as lending a hand with the moving of heavy furniture and even sweeping out on occasion.

Seated now at his mahogany desk, almost forty-five years later, Mr. Reid is able to smile reminiscently over the nights—around May first—when he used to throw a mattress on the warehouse floor and snatch a few hours of sleep before starting a new day's work—without even having taken off his clothes.

He did not like the work at first, he recalls. But it happened that his employer took a long buggy ride through New England by way of a vacation, leaving the new hired hand in charge of the business, and by the time he returned young Reid had managed so well that the older man called him "a born warehouseman."

The Carrington Warehouse, which has only recently gone out of business, was in a very poor neighborhood but it had a **wealthy and exclusive** clientèle partly because of an interior decorating department in connection with the storage business. Mr. Reid became acquainted with the customers who came there sometimes to store their household goods while their homes were being done over—and some of these, together with a number of former customers at his father's florist shop, still are among his clients after more than forty years!

So one thing led to another for Mr. Reid—but always in the right direction. By the time he was making \$15 a week he had met the one and only girl and become engaged. This gave him an added incentive to make more money, and through his ability to develop friends he learned of an opening with the Lincoln Safe Deposit Co.

So, just forty-three years ago, he became affiliated, as receiving clerk at \$25 a week, with the concern of which he is now the operating head. From then on his advancement was steady and sure. An early pamphlet of the Lincoln had this to say:

"The 'Lincoln', largely on account of the experience and unusual capabilities of Mr. Walter C. Reid, has demonstrated its right to be called the first warehouse in the city and country."

Mr. Reid was chairman of the committee of household goods storage executives who organized the National Furniture Warehousemen's Association in the summer of 1920 at Mackinac Island, Mich., where the National will hold an annual convention next month. Many years prior to that he was one of the organizers of the New York Furniture Warehousemen's Associations—the "mother" of the industry's household goods warehousing trade bodies—and has at various times served in the offices of secretary and vice-president and president.

Of the American Warehousemen's Association Mr. Reid was secretary for ten years and treasurer for thirteen years. He was the American's secretary at the time when the warehouse receipts Act, now uniform in forty-four of

(Concluded on page 76)



Vol. VI. No. 12

# TWO BITS

Gotham, June, 1926

*A Bit Here, A Bit There*

## Our Reduction Dept.

WELL, the summer has rolled ice more into the landscape, seascape, riverscape, skyscape, & most of the cluttered fire'scapes, of Gotham & environs, which means that Ye Ed. has been conditioning our personal self for going golfing at the approaching conventions. At this writing we are in pretty good shape & hope to avoid winning the booby prize in the N. F. W. A., tournament at Mackinac Isl., Mich., in July. (Last year—i. e., 1925—a couple of crooked judges awarded us a ½-doz. golfing balls on a/c of our rotten score.)

We have evolved our own system of conditioning ourself to go golfing. A method of some sort or other (sort) was necessary, as our waistline was starting to bulge disproportionately on all 4 sides, especially at the front, until it was threatened that we would be unable to get a glimpse of the ball at all upon advancing upon the tee.

The system we evolved we don't mind disclosing in the interest of good golfing. If there are any storagers who are getting fatty-like about where your belt is or your suspender buttons are, as the case may be, try our system!

As to how it operates, it is timely to tell something in this Material Handling and Equipment issue of *Distribution and Warehousing*, as our golfing-conditioning system has to do with machinery electrically-operated.

We have got to thank Mdle. Beatrice Mamin for getting us fit for the N. F. W. A. tournament. Mdle. Beatrice runs a fat-eliminating emporium in E. 47th St.—at No. 13, to be exact. Mostly, ladies prominent in Gotham's social and theatrical circles patronize the place, but all who are personally acquainted with Ye Ed. in a really friendly way will testify their belief that that is not the reason why we went to Mdle. Beatrice's to reduce our waistline. (Nobody would believe their testimony, least of all Ye Ed., but that is the high reputation we bear, anyhow—and, we think, deservedly so.)

Anyhow, you should ought to see the fat-reducing contraptions at Mdle. Beatrice's! They are a joy to look upon (especially when being patronized by above mentioned persons, but that is neither here nor there, & has no place on this page). We heard about the emporium from a furniture storager who moved some of the machinery into Mdle. Beatrice's establishment. He did not break any of the machinery but Ye Ed., after listening to his graphic allusions to the emporium, decided to pay a call to see about getting golfing-conditioned. That was positively our sole motive,

cynics' convictions notwithstanding.

Anyhow, we will not go too much into detail as to how our waistline was depreciated except to say that it was successfully negotiated with the aid of an electric reclining chair which Ye Ed. had to lie down in & roll over in. Some sort of an electric jigger or contraption or device, or whatever it is that the elegant-looking red-headed nurse called it, set up a pounding & massaging process, the purpose being to disintegrate muscle-fattiness.

So far as Ye Ed. could notice, the first treatment had no appreciable effect on our waistline, but for various reasons we were widely enthusiastic about Mdle. Beatrice's establishment, so we ventured, somewhat timidly, to go a 2nd time. The electric jigger was utilized again & the elegant-looking red-headed nurse told us we could become very svelte under the pounding of the jigger and the effects of the electricity if we would not lose courage about returning for further treatments.

Well, we are not accustomed to losing our courage so easily as all that. If ladies prominent in Gotham's social & theatrical circles have the courage to return, is the way we figured it out, should Ye Ed. be less brave? No, we said to ourself, we should not—especially in view of what the elegant-looking red-headed nurse said about the probable effects of the jigger & the electricity.

So that explains how we are all set, physically, for the N. F. W. A. golfing tournament at Mackinac Isl., Mich., in July. We feel we now have the slenderest, sveltest & most perfectly-proportioned waistline—thanks to Mdle. Mamin's electrical jigger arrangement—in Gotham. All we need now, in order to escape getting the booby prize in the tournament, is as follows: (1) The privilege to keep score for the foursome we happen to be in; (2) To brush up a bit meanwhile on our arithmetic; and (3) Some knowledge on how to play golf.

We feel so good, in fact, that we expect to make two holes in one.\*

\*Sock.

## Bolshevik Week

MAY 16-22 inclusive was celebrated by Ye Ed. as Bolshevik Week, and we advise any storager who is feeling a bit—or even two bits—"down," physically & mentally, to select any given week & assert a spirit of independence throughout it. He will be surprised as to how his self-esteem will rise, & at the end of the 7th day he will think a lot more of himself & will even begin publicly to respect himself.

Bolshevik Week for Ye Ed. was inaugurated after somebody had fed us some adulterated Gordon Water, the effect of which was to leave our condition excruciatingly low. A couple of skyrocketes, 4 Roman candles, 18 giant firecrackers and a gross of pinwheels exploded all at 1 time somewhere inside our head & we decided we'd go out & either conquer Gotham or relapse into a human worm.

Our 1st act of independence was to bawl out an East Indian waiter in a restaurant. He served a glass of ice-water with 4 greasy fingers & thumb at the top of the glass. We told him out loud that he had no more delicacy than a frog. We would hate to set down here what we told him further when we discovered he did not understand English.

Our 2nd act of independence was to refuse to take a taxi 3 blocks on a dry day simply because the Sweet Young Thing we was escorting thought we would do so simply because we had done so without protest in the past. If you want a taxi, we said gruffly, you'll go alone & pay your own fare. She did, & we haven't heard from her since, but our self-respect jumped 3 16ths of 1 per cent.

Our 3d act of independence was to tell a Main St. traffic cop what we thought of his regulations. Nearby riveting prevented our hearing his whistle & we drove our Silly Ford as far as where he stood but no further an a/c he signalled us to pause. After he had used considerable language—of the pre-Volstead saloon type—we remembered it was our Bolshevik Week & when he said he had a good mind to serve a summons on us, we got mad and shouted "Is that so!" He was so flabbergasted that he blew his whistle & we yelled "So's your old man!" at him & stepped on the pedal. The last we saw of him he was taking down the number of our car, but we have a few things we are going to tell the judge if we have to go to court.

We could go on & tell about a lot of other things that made Bolshevik Week successful, but the foregoing will give you the idea. For example, we asked "Andy" Murray how about a raise? We will not tell about the result, but all we will say here is that "Andy" is decidedly of Scotch ancestry.

The point is, try out your own Bolshevik Week & Elevate your Self-Respect. Maybe it needs elevating.

## News Item

Having finally installed a shower above our personal bath-tub, Ye Ed. contemplates to seek lower life insurance on a/c of being sprinklered.

# "Self-Government" in Business Is Plea of Chamber of Commerce

*Industrial America Voices Its Desire with Regard to Aeronautics, Agriculture, Distribution, Financing, Highways, Preparation of Shipments, Radio, the Tariff, Taxation and Other Problems. Here Are the Highlights of the Washington Meeting*

THE voice of Business America made known its policies, convictions and requirements at the fourteenth annual meeting of the Chamber of Commerce of the United States, held in Washington on May 10-13. "Self-government in business" was emphasized again and again in addresses by nationally known leaders in various industries and by public officials.

As spokesman for business, Julius H. Barnes, New York, once the Chamber's president, outlined what Business America believed the Federal Government should do in the way of assisting it to develop intelligently, and what rôle Business America itself should play. Both, he declared, should "possess a living faith that the rightful function of Government is primarily to preserve fair play between individuals; to hold open the door of equal opportunity for all; that only thusly can be fully stimulated that individual effort which in the aggregate creates national progress."

Mr. Barnes is, perhaps, the most influential member of the national Chamber, and his policies and philosophy with regard to cooperation between Business America and the Government are recognized in some political quarters in Washington as reflecting closely those of Herbert Hoover, Secretary of Commerce.

Mr. Hoover in his own address discussed self-government in business, suggesting a modification of the Sher-

man and Clayton anti-trust acts; approving the proper activities of trade associations, and reiterating his position on elimination of wastes.

The Domestic Distribution Group adopted a resolution calling for a national census of distribution along the lines of the Government's census of manufactures. In reaching this decision the Group considered many of the problems confronted by distributors.

A feature of the address by Gov. Albert C. Ritchie of Maryland was a demand for elimination of Federal competition with private industry. He alluded to such competition with warehousing as one of the instances.

The purposes and administrative methods of the Chamber's committee on trade relations were explained by Royal W. France, New York.

Many resolutions, designed to set down definitely Business America's attitude toward some of the day's vital problems, both national and international, were adopted by the Chamber. These memorials, covering such subjects as agriculture, compulsory automobile insurance, crimes, the Federal Reserve System, foreign commerce, the Interstate Commerce Commission, radio, preparation of shipments, and taxation, are printed herewith on page 55.

The following summary gives the highlights of the Washington meeting:

## *The Anti-Trust Laws*

HERBERT HOOVER, in his address at an evening general session, discussed "Some of the Currents of Development in American Business," and one of these currents, as he views them, has been a modification of the old economic ideals on which the Sherman and Clayton anti-trust Acts are based. "The past twenty-five years," the Secretary of Commerce said, "have seen the growth of larger and larger units of production and distribution—big business.

"And there is much confusion about it in the public mind. I believe that the public generally believes that we get better conditions of labor, lower produc-

SET down on these pages is a summary of what was said at the recent annual meeting of the Chamber of Commerce of the United States.

These are leaders in Business America who speak—representatives of the most powerful and influential trade association in the world. The executive and legislative and administrative branches of the Government listen to what they say each year.

The average business man should not do less.

tion costs, and better products sold on narrower margins of profit out of mass production.

"Yet the public has the natural fear that these great units will be used for domination and extinction of equality of opportunity. Arising from this fear and the wrongs done in the past, we have enacted much legislation to compel competition, such as the Sherman and Clayton Acts and numerous State enactments.

"The original conception of this legislation seems to have been to maintain a great host of highly competitive units in every trade. By degrees we have been retreating from this notion because the competition it required became at

## The Chamber's Resolutions in a Nutshell

**HERE** is what the Chamber of Commerce of the United States did at its annual convention in the way of adopting resolutions:

### Aeronautics, Commercial

Urged on Congress the enactment, at this session, of pending legislation providing for development. Suggested establishment of necessary insurance service and rates on a basis favorable to this industry's growth. Recommended Congress provide adequate funds for aerial lighthouses. Stressed the importance of proper landing fields. Professed cooperation by Chamber to business interests in developing an air mail program and simplifying airmail rates.

### Agriculture

Offered its facilities to representatives of agriculture "for holding a national agricultural conference at which the leaders in agriculture and other industries would be brought together for frank discussion of this great national problem in a determined effort to agree on a national agricultural policy."

### Aliens

Approved the present policy of issuing certificates of arrival to immigrants, but opposed "any project for the compulsory registration of all aliens in the United States, believing that such a system would be accompanied by undue hardships for large numbers of law-abiding aliens who are leading useful lives, would entail large expenditures for the Federal Government, and would be of doubtful success for its chief purpose, of establishing the facts as to aliens who may be offenders against our laws."

### Automobile Insurance

Opposed the principles of compulsory automobile insurance and advocated "efforts which are calculated to increase the safety of our streets and our highways for all users."

### Coal

Reiterated its position "in opposition to proposals which have for their object the control of industries by Governmental agencies."

### Crime

Called upon its members to cooperate with their respective State organizations set up to make careful studies and propose corrective measures. Urged on members in States where anti-crime organizations are not in existence to use their efforts toward creating them. It was held that reduction of crime could be accomplished only by "an awakened public opinion and a stimulation of public action in the restoration of respect for the authority of the State."

### Customs Formalities

Urged that, "for the purpose of promoting a freer commerce among nations, the responsible officials of the United States Government give consideration to the adherence of our Government" to the International Convention Relating to Simplification of Customs Formalities which became effective late in 1924 and which the International Chamber of Commerce helped formulate.

### Federal Reserve System

Urged that the charters of the Reserve banks be extended without delay for an indefinite period until dissolution by Act of Congress or until forfeiture of franchise for violation of law, in order "to avoid any danger of unsettlement to business or disturbance of public confidence."

### Federal Trade Commission

Concurred "in the expressions of the President of the United States," of hope that the changes of the past year in the procedure of the Commission "will be per-

manent." It was held that the changes brought the administration of the Trade Commission law more nearly into keeping with the original purpose of that law."

### Foreign Commerce

Approved of legislation to establish definitely and permanently a Foreign Commerce Service for commercial attaches and trade commissioners.

### Grazing, Western

Recommended—looking toward development of Federal forage resources in western States—"legislation giving the Departments of the Federal Government which have jurisdiction as to national forest and the public domain, authority to provide regulations which will at once maintain and improve" those resources and at the same time stabilize the livestock industry through grazing permits covering terms of years, fees, allocation of stock, etc.

### Highways

Looked "with favor upon all sound proposals for international conferences on the subject of improved highways" and asked "that all possible steps be taken to facilitate through such conferences the exchange of knowledge respecting all phases of highway development." It was held that "living standards are raised, increased means of communication lessen misunderstandings, and international trade is fostered" by highway development.

### I. C. C.

Held, as being "erroneous in principle," proposals for regional appointments to the Interstate Commerce Commission. Such proposals, if enacted into law, "would weaken the Commission and cause detriment to the public interest." It was held, and appointments should be based on ability and without regard to sectional consideration.

### National Parks

Held it to be the Government's primary responsibility, in establishing or maintaining national parks, "to preserve those features of our landscape where in sufficiently large areas the scenery is so unusually beautiful and is so characteristic of its kind, and where consequently it has so great an educational or other value, that it may be considered a heritage of the whole nation rather than a recreational facility" for adjacent inhabitants. Held it to be the primary responsibility of States and municipalities to supply recreational facilities.

### Parcel Post With Cuba

Asked Congress to remove the restrictions upon quantities of Cuban products which may be imported into the United States.

### Public Construction

Expressed belief that the public interest would best be served if all Governmental authorities followed, wherever possible, "the policy of letting contracts for public construction projects rather than to undertake construction by hiring day labor."

### Radio

Held that regulation of radio communication should not invade private management but "should be based upon the principle that the interest of the listening public is the paramount consideration in radio broadcasting." It was held to be of urgent importance that necessary regulation to prevent disorder and interference in the use of the air be promptly provided and that this was essentially a Federal rather than a State control problem. Further, that no regulation should attempt to force "undesired program matter" on the public, and that station owners, like newspapers and magazines, "must be free to select and edit their program material."

### Radio, Government

Urged that legislation be enacted "which will authorize the use of Government facilities" in cases where adequate privately-owned facilities do not exist or are not furnished; but such legislation should contain definite assurance that the Government "will not compete with privately-owned communication facilities" but would be discontinued immediately upon the establishment of adequate facilities privately owned.

### Russia

Indorsed the position of the Government in refusing to recognize Soviet Russia and pledged the support of organized business in that refusal "until Soviet Russia provides adequate assurances of its purposes to maintain its international relations in accordance with recognized standards, with evidences of its intent to redress past wrongs."

### School Lands in West

Held that Congress should at once enact legislation which would give complete and final effect to its original intention to provide, from public domain in States in the West, endowments for school purposes. "It is not in the public interest that title in these lands should continue to be uncertain," it was declared.

### Shipments, Preparation of

"In view of the great waste that has occurred through indifference or carelessness in the packing of goods by manufacturers and distributors for shipment by common carriers, this Chamber, in conformity with its expressed policy to discourage practices that lead to extravagance or waste, recommends to its membership the adoption of any and all measures that will induce shippers to take a more active interest in the preparation of their goods for shipment and thereby assist in reducing loss and damage in such transportation."

### Tariff Inquiries Abroad

Urged that Congress "so change our law as to assure that all investigations which are made abroad in relation to our tariff will be conducted in such a manner as to foster good relations." It was held to be prejudicial to development of our international trade to require foreign producers, shippers and merchants to disclose production costs under penalty of exclusion from our market.

### Taxation and Budgets, Local

Urged its member Chambers to assume leadership in making critical examinations of all proposed public expenditures in their localities and thus promote thrift and economy, locally and nationally.

### Taxation, Corporation

Requested Congress to "keep clearly in mind," in marking appropriations, "the imperative necessity of a substantial reduction in the present corporation tax." It was held that the present tax was unreasonable—a burdensome levy on the sources of production that must inevitably handicap enterprise and business expansion and result in a curtailment of earnings.

### Taxation, Forest

Urged concerted efforts, by State, Federal and private agencies, to secure the general application, in the States, of methods of forest taxation which will effectively promote timber conservation and reforestation through private enterprise.

### Vital Statistics

Urged "the various States" to take such action as may be necessary "to bring about the installation and maintenance of a uniform system of recording vital statistics."

times highly destructive. We have modified its application to organized labor. It has partially and probably will be fully withdrawn as to cooperative agricultural marketing."

Reviewing the accomplishments of the past quarter of a century, Secretary Hoover said:

"He would be rash who would state that we are finally upon the golden stairs of the industrial millenium, but there is great hope that America is finding herself upon the road to a solution of the greatest of all her problems—that is, the method by which social satisfaction is to be attained with the preser-

vation of private industry, or initiative, and a full opportunity for the development of the individual."

Pointing to "a vast growth of associational activities . . . until there is scarcely an individual who does not belong to more than one" trade association, Mr. Hoover said:



"These associations have grown up with various objectives. Some, a minority, are selfish and narrow. They all represent a vast ferment of conscious cooperation. The great majority today have a recognition of their public responsibilities, as well as the protection of their own interest. They represent a movement toward a more efficient, more ethical business practice and a better synchronizing of the parts of the economic machine. We not only see these associations working singly, but we often observe them cooperating in a vast amount of inter-trade action to these ends.

"I could point out a thousand accomplishments in this direction during the past five years. The improved employment relations are one reflection of this new spirit of cooperation. Another has been the steady improvement in business ethics through the establishment of business codes and their enforcement. No one can review the situation today in comparison with that of twenty-five or thirty years ago without a sense of deep relief.

"The whole process of eliminating waste through standardizing of dimensions and qualities of goods and business practice, is only possible by such cooperation. And these accomplishments involve not only the units of a given trade but also cooperation between the many producing and consuming trades of a given commodity. As still another example I might cite the widely successful organized cooperation between several score different shippers' organizations and transportation organizations for the more regular and efficient transport of goods.

"There are today literally thousands of such cooperative movements in progress. They were almost unknown a quarter of a century ago.

"There are still many wastes induced by destructive competition which need the searching activities of our associations. I need only cite as an example the great waste in return and cancellation privileges in the sale of goods in the wholesale trades. Nor are these wastes to be conquered by legislative regulations—you cannot catch an economic force with a policeman. But we can make progress by cooperation, and with every lift in the level of competition, self-government in business becomes stronger, and competition no less preserved."

#### Distribution

**T**HE need for a better knowledge of markets and of channels of distribution, in view of the changing character of trade brought about by hand-to-mouth buying, greater purchasing power and greater concentration of population, was emphasized by E. M. West, New York economist, in explaining before the Domestic Distribution Group the uses to which a national census of distribution might be put.

"Expanded productivity," he said, "that cannot be absorbed because of failure of any function means congestion and price

upheavals. These can be minimized only by thoughtful planning and organization. Manufacturing has developed from the hand labor stage to the specialized machine stage. Distribution lags close to the hand labor stage.

"One of the results of the post-war readjustment was hand-to-mouth buying. This imposed radical changes, transforming prevalent practices. The retailer buys less. The multiple warehouses, represented by his stock rooms and display shelves, are no longer overcrowded. His reserve stocks, the jobber may carry. But jobbers' warehouses are no longer bulging. They, too, are buying in small quantities.

"Coincidentally, jobbers have been readjusting their operations, concentrating efforts, reducing lines, seeking correlation between stocks and demand, simplifying services. Some instances may be interesting enough to warrant citation.

"One jobber has cut his lines one-third, his territory one-quarter, his accounts one-half. He has concentrated his buying, concluding that he could require from the sources of his supplies services which are essential to him only if the volume that he bought justified and supported such necessary services. He presented this concept to his customers. They could require services of him only when they bought sufficient to warrant these services. Their purchases should be in quantities and at intervals that permitted economical handling. He shared his savings with them and saw his volume increase.

"Another jobber ascertained which lines paid him a profit and which he handled below cost. He displayed his figures to his retailers. He showed them that the items which returned him a profit were handled by them at a profit; that the items he handled below cost, they sold at a loss. So he induced them to concentrate their buying on the profitable lines and to reduce their stocks of unprofitable lines. They benefited mutually.

"This was coordination of distributive functions. It was designed to eliminate wasteful and unnecessary effort, to confine selling and promotional expenditures to rapidly turning profitable lines, and to reduce to a minimum investments in inactive stocks, so releasing the bulk of their money for working capital, and making this capital work to its maximum.

"It is impossible to dissociate manufacture from distribution. Profits earned by efficient fabrication must not be dissipated by retardation in the movement of the product from factory to consumer. Essentially, the distributive machinery is only a continuation and extension of the fabricating machinery. Deficiencies in the one offset and vitiate efficiency in the other. The whole structure is a unit.

"But, unfortunately, while we know much of one part of the process, we know little of the other. All of the instances given of the intelligent development of distributive faculties are individual and fragmentary. Their very citation demonstrates the disorganization

which prevails, the faltering methods which obtain. Hence the need for a distribution census."

#### The Voice of Business

**D**ISCUSSING "Self-Government in Business," Julius H. Barnes, of the Barnes-Ames Co., New York, and a past president of the Chamber, declared that while organized business today does not claim that the practices of the past were always fair and just, it has nevertheless set standards of conduct higher than those generally accepted in earlier years.

"Both Government and Business in the main today strive," he said, "to be honest in conduct, intelligent in understanding, sympathetic in cooperation.

"Self-government, whether in industry or in politics, can only be lasting if it achieves the support of public confidence.

"Government and Business together should study and understand the conditions which preserve healthful industry, on which rests employment and opportunity. Such an understanding appears to be developing in administration and legislation.

"Government should realize, with Business, that policies of taxes must be fair and wise and stimulative, and not oppressive. Recent legislation in tax revision indicates the hopeful progress toward this end.

"Government, through its agencies of necessary public regulation, should realize that Business accepts the principle of public interest in the fields of natural monopoly, and both should strive that regulation be fair, intelligent and encouraging. The unhampered growth of public utilities and the fairer day for our great railways, justifies a belief that this principle is recognized by public agencies.

"Government, through its great departments, should realize, with Business, that accurate and disinterested information facilitates the expansion of trade and industry. The energy and efficiency, particularly of the Department of Commerce, rapidly builds this tradition of helpful service to industry.

"Government, through its Federal Trade Commission, should in cooperation with Business itself, preserve fair play between industries and individuals. Recent revision of the practices of this great commission warrant the belief that government desires to develop industry fairly and helpfully, abandoning the mistaken rôle of petty persecutor.

"Government, with Business, should assure the administration of credit influence and financial policies by enlisting administrators selected for proved ability and for public service, without the menace of political color. The evidence of congressional determination not to lightly amend or alter the great principles of currency and credit, encourage the belief that public servants soberly realize the responsibility which rests upon such action.

"Government should recognize, as Business already insists, that it is right

that national treasury, levied by authority of Government on all its people, cannot rightfully be appropriated in the interests of any single class. The evidence in high administrative office, and in the halls of Congress, that the obligation of economy is a solemn public trust and that public moneys used for purposes of price fixing violate such a trust, affords encouragement.

"Organized Business believes that progress in rightful industry is served not by rigid Government regulation, but by enlightened ideals, guiding the practical experience which removes defects and abuses and develops, without the injury of rigid bureaucracy, a larger measure of service to society along with its own rightful earnings.

"Organized Business believes that it is building a record of good faith and of standards and ethics which entitle it to public confidence and esteem.

"Organized Business believes that in Government of free people, public opinion can be created in support of sound economic law.

"Above all, Government and Industry both should possess a living faith that the rightful function of Government is primarily to preserve fair play between individuals; to hold open the door of equal opportunity for all; that only thusly can be fully stimulated that individual effort which in the aggregate creates national progress."

#### Federal Competition

A KERNEL in the talk of Gov. Albert C. Ritchie of Maryland in his address on "More Business in Government and Less Government in Business" was this:

"Put business in Government to the full extent you can, but take Government out of Business except where the great heritage of equality of opportunity necessitates its presence."

Governor Ritchie included Federal operation of warehouses in citing examples of instances where the Government is today in competition with private enterprise. Some of this varied competition is doubtless inevitable, he said:

"But it would be easy to show the resulting economic waste compared with private industry, due to a variety of causes, but perhaps chiefly due to the lack of necessity of showing a profit and to the lack of a permanent policy. Operating costs are regarded as of subordinate importance, losses are frequently absorbed and swallowed up in general accounts. Private business cannot compete. But the citizen pays only indirectly through taxes, and so he is either ignorant of or indifferent to what is going on, although his own tax bill is increased by the tax-exempt feature of the Government's operations.

"We must remember that private industry has no treasure chest whose contents it does not earn. Public business, on the other hand, has the public treasury. . . .

"Anything that chills the free enterprise of business, or that deadens its initiative, or interferes arbitrarily with

the free play of economic opportunity, is destructive both of social and economic progress."

#### Trade Relations

ADMINISTRATIVE methods for the self-government of industry were outlined by Royal W. France, president of Salt's Textile Co., New York, addressing the Domestic Distribution Group on the subject "The Trades Relations Committee as a Means for Developing Self-Government in Business." He said:

"The elimination of trade abuses and the regulation of trade activities will be profitable not only to the business man but to the consumer.

"I do not believe that deliberate unfairness or positive dishonesty is our greatest difficulty. The greatest difficulty which we have to overcome is a lack of understanding of the problem of the man on the other side of the fence.

"All of the problems which arise between the manufacturer, salesman, jobber and the retailer are all abuses which have naturally sprung up from a too close consideration of what is deemed to be the firm's selfish interest without the full realization that the most enlightened form of self-interest results in that cooperation with one's fellows which brings about an easier and sounder solution of the problems of business and of life.

"It was with the thought of bringing together these conflicting interests and furnishing a clearing house through which constructive ideas could flow that the Committee on Trade Relations of the United States Chamber of Commerce is being formed, consisting of representative manufacturers, wholesalers, retailers and members of the consuming public, to aid trade groups in setting up trade relations committees in each trade for dealing with all of the various complaints and misunderstandings which arise between the different branches of industry.

"I believe that if the work of this committee can be carried through to its logical conclusion, it will be a long step forward in the matter of bringing about a closer cooperation in industry, which will result in removing causes of friction and eliminating over-production and consequent waste, and rebound to the interest not only of the purchasers and distributors of merchandise but to the consuming public in the form of better merchandise at less cost.

"This committee can perform a great function in educating the retailer to better merchandising methods and the manufacturer to living up to the obligations which he does and must assume, and in bringing about the standardization of business practices.

"There is a great work of national organization to be done. America must continue to show the way to the world as the leader in efficient manufacturing and distributing of products, and this result can only be reached by closer and closer cooperation of all the different

elements which go to make up the industrial machine. There are great problems of mutual interest to the producer and distributor, such as—

"1. The degree to which installment selling is economically sound.

"2. The use of tribunals of arbitration instead of relying upon the slow processes of the Courts.

"There are various other problems of a similar nature, aside from the actual questions of trade abuses, which the Trade Relations Committee acting as a clearing house for information and the exchange of viewpoints could help to clarify.

"But back of the whole matter are greater and profounder truths. All of the efforts of the Trade Relations Committee will be sterile and fruitless unless there shall grow in the minds of American business men generally the desire to conduct their business on a higher and better plane. The will to improve and to cooperate must be created and must grow. It is trite to say that the Golden Rule must be applied in business, but after all in its final analysis the application of the Golden Rule is the solution of the whole problem. Unless the manufacturer is willing to do to the retailer or the retailer is willing to do to the manufacturer as he would be done by—and this thought becomes the basis not merely of high sounding words but of concrete action—there can be no solution.

"The principle is clear—fair dealing, consideration for the rights of others and a desire to do as we would be done by. The translation of this ideal into practice in all the infinite and complicated details of business relations is harder. It requires thought; it requires work; it requires infinite patience. But in the end, working together for a common purpose and using the splendid machinery which is being set up by the United States Chamber of Commerce as a means to that end, we will make progress toward the desired goal."

#### Agriculture

THE Chamber's president, John W. O'Leary, Chicago, in his address declared that agriculture was the most important problem confronting American business today, and that—

"Claims to the contrary notwithstanding, the destiny of American agriculture will be achieved through the policy of self-government and not, as some would have us believe, through paternalistic control by the Federal Government.

"Probably no single subject has had more thought on the part of your organization during the year than this all important one. And properly so, for the prosperity of all our people is bound up in the success of agriculture."

Alluding to the National Distribution Conference, he said it had centered attention "on a most important and vital phase of business activity"—a phase which had received less attention than its importance deserved.

"We have been a great producing nation," he pointed out. "Our thought

and mind has been concentrated on improved and increased production. We have reduced costs through mass production and increased consumption through the reduction of costs until in many instances we have reached a state of production in excess of the consumption demand.

"While the concentration of thought has been on production, we have hardly recognized the importance of having thought on distribution keep pace. Facts and figures are few, or if they exist are not available. The Distribution Conference recognized a need for facts and figures for sane consideration by recommending the continuance of the work by the national Chamber through four committees.

"Until there can be developed something tangible to work with, it is difficult to excite interest on the subject of distribution. When we bear in mind, however, that the return to the farmer on his product may be in the form of a deficit through lack of orderly distribution which might lawfully and easily be secured, we are conscious that prompt attention should be given the subject. Even without surplus total crop, many instances have developed where the price of the commodity has been materially reduced to the point of loss through the excess receipts in a particular market on a particular day. Not only is the farmer affected but other lines of business have the same experience. Some phases of distribution may be corrected promptly."

#### Insurance

**C**ERTIFICATION of automobile title legislation was urged upon all the States in an address by H. A. Smith, president of the National Fire Insurance Co., Hartford, Conn., before the Insurance Group.

"Today," he said, "we find twenty-four States which have certification of automobile title legislation. It is important that all States have similar legislation in order to prevent automobile thieves from running stolen cars from States which have this legislation into States which do not have it."

The insurance advisory committee on compulsory automobile insurance in its report held that investigation had disclosed that pedestrians were responsible for as many accidents as motor car drivers, and it recommended that the national Chamber go on record opposing such compulsory coverage. Subsequently a resolution to that effect was adopted by the Chamber.

#### Cooperative Marketing

**A** WARNING that the success of cooperative organizations was measured by the services they rendered to producers and consumers and not by the autocratic control of commodities, was sounded at an Agricultural Group session by W. M. Garrard, general manager of the Staple Cotton Cooperative Association, Greenwood, Miss. He said: "Cooperative marketing agencies must be judged by the same standards that

are applied to other organized industries. Cooperative marketing is in direct conflict with the organized holding movement.

"There seem to be two pretty well defined classes of individuals in their thinking on this subject. One group believes that ultimate success depends upon commodity control. Another group is equally certain that no permanent success can be assured if it is based solely on the control idea. It holds to the theory that only through superior service in marketing can any permanent success be attained.

"We cannot lay too much stress upon the principles in the two schools of thought. One is based upon the principle of autocracy—might makes right. History teaches us that this principle never met with success.

"Unless the service offered by a cooperative association is of a superior quality, I doubt seriously the justification for the organization of the association."

#### Installment Selling

**I**NSTALLMENT selling was characterized as the strategy of bitter warfare, with the spirit of jazz economics, by O. H. Cheney, vice-president of the American Exchange-Pacific National Bank of New York, in addressing the Domestic Distribution Group.

"If there were more real facts on the subject," he said, "there would be fewer opinions. But the amount of data which is available is not a credit to American business methods.

"Present-day installment selling was born of competition and lives and grows by competition. And who knows?—some day it may die off through competition. Those who see it and deal with and adopt it as a business-building device are mistaken—its nature is that of the strategy of bitter warfare and not of the science of building. The installment selling of today comes not only from competitive selling but also from competitive banking—even from competitive buying. Installment buying is competitive living.

"The answer of a great many economists of every degree of amateur and professional standing is that installment selling stimulates buying, increases production, increases employment, increases earnings and produces all-round prosperity. It is a sound theory as long as it works and it will become unpopular when it doesn't.

"Installment selling is the recognition—unconscious, very often—of the fact that high pressure selling competition has used up the consumer's dollar and that each industry must fight for the dollar of next week—and the dollar of next year.

"Installment selling has grown because of competitive buying. It is the spirit of progress sharpened down and focussed on possession. It is the spirit of living life with greater and greater avidity. It is the spirit of jazz economics."

What checks may be imposed on in-

stallment selling—fixed at the latest estimate at \$6,500,000,000 for 1925—and the methods of imposing them, were suggested by George W. Norris, president of the Federal Reserve Bank of Philadelphia, addressing a Financial Group meeting.

"In the first place," Mr. Norris said, "it is evident that it is a problem in sociology, in business and in banking. It is also reasonably clear and there are certain classes of goods in which the installment selling principle may be applied and certain others to which it may not. Finally, that the terms—initial payments and length of credit—may be pretty clearly defined.

"There is no use of running counter to a great current which has its source in the very well-springs of human nature. When such a current is in full flood, it may be guided, directed and kept from becoming destructive, but it cannot be dammed, still less reversed. In this country we have been enjoying for the past four years a period of great prosperity, during which the purchasing power of the masses has been greater than ever before in our history.

"We have a natural inclination or predisposition to buy, encouraged and developed by an incredible mass of seductive advertising. Hitherto this inclination has been curbed by lack of the money with which to pay. Now this barrier has been broken down.

"Who is to apply the brake? Not the dealer who finds that it increases his sales. Not the manufacturer whose god is quantity production. Not the credit company whose livelihood is dependent upon it. Not the bank, which finds the business profitable and knows that a competitor would be glad to get it. Who then? It seems to me that it must be a process of gradual education in which the schools, the churches, the press and all other molders of public opinion must do their part."

#### Taxation

**A** SAVING of a billion dollars a year by checking waste and extravagance in Government was suggested as a possibility by William Fortune, Indianapolis, in an address at the closing general session of the Chamber.

"To do this," Mr. Fortune said, "it will be necessary to cut from local taxation about 15 per cent, but if we include foreign budgets, an average of less than 10 per cent will be enough to make up the aggregate of a billion dollars. It can be done and it should be done without eliminating anything essential and without retarding progress. It may be accomplished through wiser economy and better efficiency."

To accomplish this, Mr. Fortune advocated organized effort, especially on the part of commercial and trade organizations, along the following lines:

1. A crusade against waste by the application of modern business methods in local government.
2. Prevention of the further multiplication of local taxing districts.

(Concluded on page 64)



# WHAT'S WHAT IN NEW BUILDINGS

IIC



Grand Rapids Storage & Van Co.  
Grand Rapids, Mich.



**A**FTER two years of effort on the part of the Grand Rapids Storage & Van Co., Grand Rapids, Mich., the local zoning commission granted permission for the construction of a modern fireproof warehouse, for household goods storage, on the company's site at Robinson Road and Lake Drive—in the center of the business district of a residential section of the city and prominently located on two through motor highways as well as street car lines.

This new depository will cover the entire plot, which is irregular in shape, having a frontage of 112 feet on Robinson Road and 124 feet on Lake Drive.

With an area of 16,000 square feet on each floor, the warehouse will stand five stories high and also have a basement. The structure will be of the skeleton type of reinforced concrete with brick inclosing walls.

The first story will be divided into high grade retail shops, offices for the storage company, and a driveway and a receiving platform. The second story, eight feet high, will have the piano room, trunk and rug racks, and open storage space for small lots. The third floor will be devoted to open storage exclusively. The fourth and fifth stories will be divided into fireproof compartments with labeled doors.

In the basement will be the boiler and coal, moth-

killing and packing rooms, an excelsior vault, a barrel room, and space for storing automobiles.

The exterior of all sides will be faced with cream-colored glazed terra cotta for the first story and with Kittanning pressed with glazed terra cotta trimmings for the upper stories. Shop windows will have copper frames and plate glass of latest designs.

The offices will be of pleasing effect—Caen stone walls, art marble floors, marble counter, decorative ceiling. A large silver vault with massive door will open from the general office. Windows will be of the casement sash type protected by ornamental wrought iron grilles. The entrance door will be of bronze, opening into an artistic vestibule. Lighting will be of the indirect type—the nearest artificial light to daylight.

A large electric freight elevator, Otis make, will give freight service to all floors and an automatic passenger elevator will be available for patrons and employees.

All building requirements of the National Board of Fire Underwriters and of the Michigan State Inspection Bureau are being fully complied with in order to enjoy a low insurance rate.

The warehouse will be the largest of its kind in western Michigan. It was designed and is being erected by George S. Kingsley, warehouse construction specialist, of New York City.

# WITH THE ASSOCIATIONS

HERE is presented in tabloid form that Association news that is of general interest to the industry as a whole. No effort is made to present complete reports of all Association meetings; the dissemination of such information is logically the work of the officers and the committee chairmen. What is presented here is in effect a cross-section review of the major activities so that Association members may be kept advised as to what "the other fellow" elsewhere in the country is thinking and doing. When annual or semi-annual meetings are held, more extended reports will occasionally be published.

## National

JULY 9, 10, 11, 12 and 13 have definitely been set as dates for the annual convention of the National Furniture Warehousemen's Association at the Grand Hotel on Mackinac Island, Mich. The decision was made by the secretary, Ralph J. Wood, Chicago, in whose hands the problem was left by the organization's directors because of the necessity of selecting dates to conform with schedules of the Great Lakes boats, on which a majority of the delegates will travel to Mackinac.

The easterners will leave Buffalo on the morning of July 7, picking up other delegates at Cleveland around noon, and at Detroit on the 8th, and arrive at Mackinac about 8.15 a. m. on the 9th—in time for the opening of the convention.

From Chicago another boat will leave at 2.30 p. m. on the 8th, arriving at Mackinac about 9.30 a. m. on the 9th.

The National's directors have approved a plan for pooling the purchase of automobile insurance, as suggested by the automobile insurance division of the insurance committee—Milo W. Bekins, Los Angeles, chairman, and A. H. Hollander, Chicago, vice-chairman.

The plan contemplates the issuing of a blanket policy to the National. Under this coverage certificates would be granted to members. The underwriting company is the National Union Co., Pittsburgh, and there would be a working arrangement with the Cass & Johansing Co., Los Angeles, which already handles transit insurance for about 300 of the National's members.

It is anticipated that the plan will save the members from 30 to 40 per cent on this class of coverage.

The headquarters of the National has been removed to the South Side Trust & Savings Bank Building at 4651 Cottage Grove Avenue, Chicago—conveniently situated near the place of business of the secretary, Ralph J. Wood. The new address will be the office of the executive secretary, Henry Reimers, formerly located at 765 Oakwood Boulevard.

Fifty-five members have been added to the National's membership, making a total of 817 companies now identified with the association.

The following were admitted after their applications had been approved by the directors: Central Transfer & Storage Co., Dallas; DeVries Storage & Warehouse Co., Chicago; S. A. Harris Transfer Co., Baton Rouge, La.; Lawson's Transfer & Storage, Rockford, Ill.; Sage Transfer & Storage Co., Pueblo, Colo.; St. Louis Moving, Storage & Warehouse Co., St. Louis.

The following companies were automatically made members as a result of the amalgamation of the household goods division of the American Warehousemen's Association with the National:

Aberdeen Storage Co., Aberdeen, S. D.

## Announcement:

OWING to the unusually large number of editorial pages required to cover the subject of material handling and labor saving in this special issue on that subject, the space devoted to the "With the Associations" department has been considerably cut down herewith. Many of the reports from trade body secretaries and correspondents have been shortened, and only the high lights are presented.

Similarly the number of news pages has been reduced.

The department "From the Legal Viewpoint" has been eliminated but will be resumed next month.

"Two Bits" inevitably is present—see page 53.

Carolina Storage & Distributing Co., Raleigh, N. C.; Columbus Fuel & Storage Co., Columbus, Neb.; Crystal Ice & Fuel Co., Independence, Kan.

Dallas Storage & Warehouse Co., Dallas, Tex.; Donaldson Transfer & Storage Co., Pittsburgh; Durham Storage Co., New Haven, Conn.

Eau Claire Warehouse Co., Eau Claire, Wis.

Great Northern Warehouses, Syracuse, N. Y.

F. H. Hanlon, Batavia, N. Y.; Harrisburg Storage Co., Harrisburg, Pa.; Hodge Storage & Cartage Co., Springfield, Ohio; Holman Transfer Co., Portland, Ore.; Hummel Warehouse Co., Allentown, Pa.

Knickerbocker Storage Co., Cleveland. Louisville Public Warehouse Co., Louisville, Ky.

Maier Sales & Storage Co., Huntington, W. Va.; Mauser Warehouse Co., Youngstown, Ohio; Merchants Transfer & Storage Co., Washington, D. C.; Merchants Warehouse Co., Peoria, Ill.; Metropolitan Warehouse Co., Washington, D. C.; Clay S. Morse, Inc., Portland, Ore.; M & L Transfer & Storage Co., Amarillo, Tex.; McLaughlin Warehouse Co., Bangor, Me.

National Capital Storage & Moving Co., Washington, D. C.; New Bedford Storage Warehouse Co., New Bedford, Mass.

O. K. Transfer & Storage Co., McAlester, Okla.

Raleigh Bonded Warehouse Co., Raleigh, N. C.; Reliable Storage & Transfer Co., Oklahoma City, Okla.; A. C. Rice Storage Corporation, Elmira, N. Y.; Riverside Truck & Storage Co., Bay City, Mich.; Rodgers & Albany Warehouse Co., Chester, Pa.

W. H. Schneider Storage Co., Canton, Ohio; Syracuse Furniture & Forwarding Co., Syracuse, N. Y.

Taylor Edwards Warehouse & Transfer Co., Seattle; Terminal Warehouse Co., Omaha; W. M. Terry Co., Bridgeport, Conn.; Texas Fireproof Storage Co., Waco, Tex.; Try-Me Transfer & Storage Co., Inc., Huntington, W. Va.

Union Transfer Co., Fargo, N. D.; United Warehouse Co., Seattle.

Wilson & Hamilton Storage & Transfer, Zanesville, Ohio; Wittichen Coal & Transfer Co., Birmingham, Ala.

Associate members: W. Boote & Sons, Liverpool, England; E. W. Marshall, Ottawa, Canada; Western Transfer & Storage, Ltd., Edmonton, Canada.

## American

PLANS are under way for holding a summer meeting of the merchandise division of the American Warehousemen's Association in Chicago, the dates to be probably July 15 and 16. This will enable members who are members also of the National Furniture Warehousemen's Association to move direct from Mackinac Island, Mich., where the National's convention will be concluded earlier in the week, to Chicago in time to attend the A. W. A. assembly.

Volume II of the American's most val-

uable book, "Warehousing General Merchandise. An Encyclopedia," is expected to be ready for distribution and sale within a few months. It will contain a classification of 142 commodities not treated in the first volume. The work involves approximately 250 specific classifications and 350 types and sizes of packages, all based on information derived from 500 reports submitted by interested members on commodities that have come into their plants.

The new volume, to consist of about 160 pages, will contain also the new standard Terms and Conditions—(turn to page 30 of this issue of *Distribution and Warehousing*)—a key to the floor-load system of rate-making and specifications, with facsimiles, of the standard approved warehouse receipts. The price of the book will be announced in due time.

The following companies have been elected to membership in the merchandise division of the American:

Atlas Storage Warehouse Co., Philadelphia; W. Boote & Sons, Liverpool, England; City Transfer & Storage Co., Long Beach, Cal.; Driver Storage Co., Berkeley, Cal.; General Warehousing Co., St. Louis; Hollander Fireproof Warehouses, Chicago; Lincoln Storage Co., Cleveland; Long Island Storage Warehouses, Brooklyn, N. Y.; R. F. Post, Drayman, Scranton, Pa.; Texas Ice & Refrigerating Co., Fort Worth; Thompson Transfer & Storage Co., Aurora, Ill.

### Canadian

A SUMMARY of the program of the eighth annual convention of the Canadian Storage & Transfermen's Association, to be held at the King Edward Hotel in Toronto on June 10, 11 and 12, has been made public by E. A. Quigley, Vancouver, D. C., the organization's secretary, and it shows that several warehousemen from the United States will be among the speakers. They include Henry Reimers, Chicago, executive secretary of the National Furniture Warehousemen's Association, and W. W. Morse, Minneapolis, a former president of the American Warehousemen's Association. A representative of Moores & Dunford, Inc., warehouse architects of New York and Chicago, also will talk. Others on the program are A. M. McIntosh, T. Armstrong and C. F. B. Tippet, Toronto storage executives, and Fred Crone, Vancouver warehouseman.

The opening business session will be in the forenoon of the 10th, with Mayor Thomas Foster of Toronto extending a welcome. F. D. Gross, Vancouver, the association's president, will present his annual address, and treasurer and secretary's reports, introductions and announcements will follow.

At the afternoon meeting "Our Association, Past, Present and Future," will be discussed, and there will be divisional

meetings and a gathering of the directors.

On the 11th the subjects to be discussed include "Merchandise Warehousing and Spot Stock Distributing," "Co-operative Advertising," "Long Distance Hauling," "Warehouse Construction and Facilities," "Merchandise Warehouse Accounting" and "Ontario Legislation for Storage and Sale of Goods," at the morning and afternoon sessions.

Saturday, the 12th, will be given over to committee reports, election of officers, and, at 7 p. m., the annual dinner.

A comprehensive report of the Canadians' convention will appear in the July issue of *Distribution and Warehousing*.

### The Conventions in June and July

*THESE two months will be busy ones for storage executives who attend their industry's trade association meetings. Annual or semi-annual conventions include the following:*

June 10-12 at Toronto—Canadian Storage & Transfermen's Association.

June 18-20 at Saratoga Springs, N. Y.—New York State Warehousemen's Association.

July 9-13 at Mackinac Island, Mich.—National Furniture Warehousemen's Association.

July 15-16 at Chicago—Merchandise Division of American Warehousemen's Association.

Comprehensive reports of these conventions will be published in the subsequent months' issues of *Distribution and Warehousing*—the Canadian and New York State meetings in the July number and the National and American gatherings in the August number. Watch for the stories!

### California

MORE than a hundred members of the California Warehousemen's Association met at the Coronado Hotel, in Coronado, on May 10-12, to attend the annual convention. Fifty of the delegates arrived by steamship from San Francisco. Every country and virtually every city were represented and the meeting was considered the most successful in the organization's history.

The guest of honor, the actuary of the merchandise division of the American Warehousemen's Association, Chester B. Carruth, Chicago, addressed the convention on "The Warehouse Industry in the March of Progress." Charles T. B. Jones, San Francisco, the president, was in the chair. Subjects discussed include uni-

form accounting, warehouse distribution, licensing and bonding under the California Warehouse Act, warehouse space leasing, standardization of regulations and methods at rural warehouses, warehouse rates at California distribution centers, in-transit privileges for warehouses, fire and compensation insurance, uniform country warehouse receipts, trapcar services and community advertising.

—H. H. Dunn.

(Note: A more detailed report of the California meeting will appear in the July issue.—Ed.)

### Illinois Furniture

FIREPROOF warehouse contents rates—household goods plants—have been reduced about 40 per cent in Chicago as the result of several years of activity by the Illinois Furniture Warehousemen's Association.

Frank Bentley, a Chicago insurance broker, compiled rates on coverage on fireproof warehouses of this character throughout the country, showing that plants, in many cities, having no better fire protection—and in many instances not so good—enjoyed much lower rates than in Chicago, and showing also that the losses paid by the insurance companies in Chicago did not warrant the rates then being charged.

Last November a meeting was arranged with J. S. Glidden, assistant manager of the Chicago Board of Fire Underwriters, and the problem was taken under consideration. Subsequently another meeting was held, the Illinois association being represented by A. H. Hollander, on the National Furniture Warehousemen's Association's insurance committee; Henry Reimers, executive secretary of the N. F. W. A.; J. L. McAuliff, secretary of the Illinois association; Ralph J. Wood, secretary of the N. F. W. A., and president of the Illinois body, and J. H. Meyer, T. A. Jackson and Martin H. Kennelly. Recently announcement was made that the reduction sought had been granted.

### Minnesota

WITH more than fifty members and guests attending, the Minnesota Warehousemen's Association held its annual meeting at the Nicollet Hotel in Minneapolis, on April 16. Officers and directors were elected as follows:

President (reelected), Paul W. Frenzel, vice-president St. Paul Terminal Warehouse Co., St. Paul.

Vice-president, G. R. Turner, secretary Cameron Transfer & Storage Co., Minneapolis.

Secretary-treasurer (reelected), George A. Rhame, Minneapolis.

Directors, cold storage division, William D. Sammis, secretary Produce Refrigerating Co., Minneapolis; merchandise division, George Hamley, president Colonial Warehouse Co., Minneapolis; household goods division, George LaBelle, Skellet Co., Minneapolis, and Ballard Storage & Transfer Co., St. Paul; from Duluth, A. C. Dunn, general manager Mc-

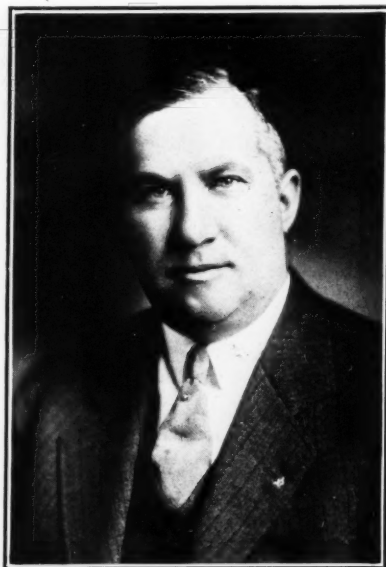




More than 220 delegates and guests attended the banquet held by the Missouri Warehousemen's Association in connection with the annual meeting—at the Kansas City Club in Kansas City

Dougal Terminal Warehouse Co.; at-large, J. P. Feuling, president Central Warehouse Co., St. Paul.  
Dr. E. A. Back, chief of the Bureau

### H. C. Herschman



Elected president Missouri Warehousemen's Association

of Entomology of the U. S. Department of Agriculture, Washington, D. C., addressed the convention on the subject of scientifically protecting goods and buildings against insect infestation.

(Note: A more detailed report of the Minnesota meeting will appear in the July issue.—Ed.)

### Missouri

WITH an attendance that doubled that of any previous State gathering of its kind the Missouri Warehousemen's Association's convention was held in Kansas City on April 16-17, the sessions taking place at the Kansas City Club. There were record attendances at the business

meetings, and more than 220 persons were present at the banquet on the evening of the 16th. Officers and directors were elected as follows:

President, H. C. Herschman, president Terminal Warehouse of St. Joseph, Inc., St. Joseph.

Vice-president merchandise division, Charles C. Daniel, president Central Storage Co., Kansas City.

Vice-president household goods division, G. C. Dintelmann, secretary Ben A. Langan Fireproof Storage Co., St. Louis.

Vice-president cold storage division, E. L. Winterman, president Tyler Warehouse Co., St. Louis.

Secretary, A. H. Amelung, secretary General Warehousing Co., St. Louis.

Treasurer, Jefferson Perky, general manager Perky Bros. Transfer & Storage Co., Kansas City.

Directors, Fred D. Aab, vice-president Springfield Warehouse & Transfer Co., Springfield; Julian M. Gibson, vice-president General Warehousing Co., St. Louis, and F. W. Keene, Columbia Terminals Co., St. Louis, respectively the retiring treasurer, president and merchandise divisional vice-president of the association.

—Ben S. Brown.

(Note: A more detailed report of the Missouri meeting will appear in the July issue.—Ed.)

### New York Furniture

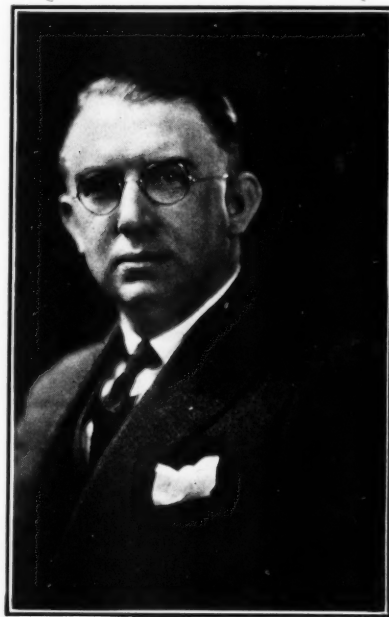
THE features of the May meeting of the New York Furniture Warehousemen's Association, held at the Aldine Club, on the 10th, were a decision reached to cooperate closely with the National Furniture Warehousemen's Association with relation to indorsing companies for membership in the National, and the adoption of a plan to prepare a code of ethics.

The problem of indorsing companies for N. F. W. A. membership was given considerable discussion, one suggestion being that a local company be required to be a New York association member at least one year before being approved as eligible to apply for a National membership. On motion by Walter C. Gilbert it was voted that the directors work out a method of procedure and present it to

the New York association for consideration.

Charles S. Morris suggested that the New York body adopt the code of ethics

### G. C. Dintelmann



New vice-president household goods division Missouri Warehousemen's Association

of the N. F. W. A. and require new members in the New York association to subscribe to it and then enter on a term of probation before becoming eligible to the National. This idea was laid over for further discussion pending action which will be taken, on motion by Mr. Gilbert, by the directors in the way of preparing some sort of a code.

—K. B. S.

### New York State

THE annual meeting of the New York State Warehousemen's Association will be held at the Grand Union Hotel.

in Saratoga Springs, N. Y., on June 18-20, with R. M. King, Syracuse, the president, in the chair. Business sessions will be held on the 18th and 19th and a banquet on the evening of the 19th. The afternoon of the 19th and Sunday, the 20th, will be devoted to recreation.

The New York body is made up of various local associations—the Buffalo Furniture Warehousemen's Association, the Central New York Warehousemen's Club, the New York Furniture Warehousemen's Association, the Truckmen's and Warehousemen's Association of Rochester and the Warehousemen's Association of the Port of New York.

### Massachusetts

THE May meeting and luncheon of the Massachusetts Warehousemen's Association was held at the Exchange Club in Boston on the 20th, with Samuel G. Spear, Boston, president, in the chair. There were about twenty-five members present.

M. D. Liming, manager of the Bureau of Commercial and Industrial Affairs of the Boston Chamber of Commerce, spoke on the economic situation of New England, past, present and prospective. He said that a careful analysis of all the factors contributing to prosperity showed a generally favorable condition.

President Spear suggested that an invitation be extended, at the proper time, to the American Warehousemen's Association and the National Furniture Warehousemen's Association to hold their annual conventions in Boston in 1927. It met with approval.

In connection with starting an advertising campaign to sell the warehouse industry to the public, Olin M. Jacobs, secretary, suggested the following:

(1) Preparation of articles on warehousing of such a character that they would be of value to current publications on account of the human interest in them.

(2) A mail campaign presenting the services offered by the responsible warehouseman.

(3) Local application of direct solicitation as are now offered by the American Chain of Warehouses.

(4) Everybody to take advantage of opportunities for warehousemen to speak before men's clubs.

Other members suggested broadcasting on the radio and the display of moving pictures illustrating the dependable service given by modern warehousing plants.

—S. F. Holland.

### Washington

THE Washington State Warehousemen's Association held its annual convention in Portland, Ore., on May 8-9, in conjunction with a meeting of the Portland Draymen and Warehousemen's Association, Inc., the sessions taking place in the local Chamber of Commerce rooms and a banquet being held at the

### Rulers in Washington State



Group of officers and directors of the Washington Warehousemen's Association. Left to right, front row: Millard Johnson, Spokane, director; C. C. Cater, Spokane, vice-president; W. G. Dickinson, Seattle, president; James A. Walker, Seattle, secretary; Dean McLean, Tacoma, director; Walter Eyres, Seattle, director. Back row: J. J. Crawford, Yakima, director; G. B. Nicoll, Seattle, treasurer; J. E. Turnquist, Aberdeen, director; Fred Grimmer, Spokane, director, and J. M. Watkins, Spokane

Multnomah Hotel with the Washingtonians as the guests of the Portland organization. The Washington association elected officers as follows:

President (reelected), W. G. Dickinson, president Lambert Transfer & Storage Co., Seattle.

Vice-president, C. C. Cater, president Cater Transfer & Storage Co., Spokane. Secretary, James A. Walker, president Reliable Transfer & Storage Co., Seattle.

Treasurer, G. B. Nicoll, secretary United Warehouse Co., Seattle.

Directors, eastern part of State, Millard Johnson, president Spokane Transfer & Storage Co., Spokane; J. J. Crawford, president Yakima Transfer & Storage Co., Yakima, and F. E. Grimmer, Grimmer Storage & Truck Line, Spokane. Western part of State, Walter Eyres, president Eyres Storage & Distributing Co., Inc., Seattle; J. L. Winn, president Winn & Russell, Inc., Seattle; Dean McLean, secretary McLean the Mover, Inc., Tacoma, and J. E. Turnquist, president A. A. Star Transfer Co., Aberdeen.

The need for Public Service Commission control of warehouses to insure proper regulation of rates and to protect the public against irresponsible operators was emphasized by speakers at the business sessions. In support of such control, Millard Johnson, Spokane, said legislation to that effect would remove many present evils besetting the industry, such as poor conditions, unfair discrepancies in rates, and overcharges to the public.

As set forth in the May issue of *Distribution and Warehousing*, the uniform warehouse receipt adopted by the American Warehousemen's Association and approved by the United States Department of Commerce has been put into use generally in Seattle, and one of the purposes of the Washingtonians in holding their convention in Portland was to have similar adoption effected in Oregon generally. This subject was discussed at the joint meeting of the Wash-

ington and Portland bodies, and it is anticipated that the movement will culminate successfully in the near future.

—F. K. Haskell.

### Nebraska

THE Nebraska Warehousemen's Association held its annual meeting at the Omaha Athletic Club in Omaha on May 13 and elected officers and directors as follows:

President, W. W. Koller, president Gordon Fireproof Warehouse & Van Co., Omaha.

Vice-president, Melvin Bekins, manager Bekins Omaha Van & Storage, Omaha.

Secretary-treasurer (reelected) Charles Knowles, president Knowles Storage & Moving Co., Omaha.

Directors, W. H. Blakeman, president Blakeman Transfer & Storage Co., Inc., Norfolk; R. A. Ford, president Ford Transfer & Storage Co., Omaha; F. W. Putney, secretary Globe Delivery Co., Lincoln, and William Spangenberg, president Grand Island Storage & Forwarding Co., Grand Island.

In his talk as retiring president, Frank H. Myers, Omaha, outlined the importance of cooperation of business with a view to advancing mutual interests and pointed out that the principle could be applied profitably to the storage and moving industry.

### Another New York Plant

Day & Meyer, Murray & Young, Inc., household goods warehousemen in New York City, has purchased property 95 by 100.7 feet on East Sixty-first Street, and is planning, according to Thomas F. Murray, president, to erect a 15-story addition to the company's present building at 305-307 East Sixty-first Street.

## Highlights of Convention of Chamber of Commerce

(Concluded from page 58)

3. The coordination of national and State taxation systems.

4. Revamping of antiquated systems of administrative service in State, city, county and township governments, as has been done in some States.

5. Establishment of State tax commissions to supervise public expenditures and check against fraud and mistakes.

6. Establishment of budget systems.

7. Publication of reports to inform the public of the need for and value of proposed public expenditures.

"The signs of danger are before us," said Mr. Fortune. "The demands of local governments are running ahead of the apparent growth in national income and are swelling out of proportion to the increase in population."

Favorable progress in the reduction of Federal taxation was contrasted with the rapid increase in State and local taxation by Representative Ogden L. Mills, of New York, in an address at the closing general session.

"Centralization in the United States," said Mr. Mills, "is the enemy of good government."

"While our eyes have been turned to Washington and we have been voicing our satisfaction over the accomplishments there, we have failed to note what was happening at home. Gratified with the steady reduction in the cost of the Federal Government, we have been neglectful of the fact that the costs of State and local governments were rising so steadily as to affect and wipe out practically all of our gains. Far from being lower, our total taxes were actually higher in 1924 than in 1923, and only 127 millions lower than the peak year 1919.

"While Federal taxes were reduced from 5069 millions in 1919 to 3095 in 1924, or a reduction of 1974 millions, State and local increased from 2965 millions to 4812 millions, or an increase of 1847 millions. One is almost tempted to say, 'What's the use?' Between 1919 and 1924 State taxes increased 87 per cent, local 56 per cent and Federal taxes declined 39 per cent. . . .

"The conclusions which I draw are that we are confronted with three very definite questions:

"First, whether the costs of our State and local governments are excessive, judged from the standpoint of whether we could not get the present service at lower costs;

"Second, whether existing methods of financing these costs are sound economically, and,

"Finally, whether our State and local tax systems are not in need of a thorough overhauling in the interest of a fairer allocation of the burden."

### The Elections

ON the concluding day the directors reelected John W. O'Leary, Chicago, as president, and, as vice-presidents,

Lewis E. Pierson, New York, eastern district; Robert R. Ellis, Memphis, southern district; William Butterworth, Moline, Ill., north central district; and Paul Shoup, western district.

As a special tribute in recognition of public services, Fred I. Kent, New York, chairman of the economic restoration committee of the International Chamber of Commerce, and Elbert H. Gary, for advancing "the new conception of the American business executive contributing to the common good," and Jeremiah Smith, Jr., financial administrator of Hungary, for his work in restoring that country's financial ability, were chosen honorary vice-presidents.

The Chamber elected the following as directors: Walter L. Crocker, Boston; Ernest T. Trigg, Philadelphia; Frank D. Jackson, Tampa; Randle T. Moore, Shreveport; Frederick J. Haynes, Detroit; Karl DeLaittre, Minneapolis; W. M. G. Howse, Wichita; Lafayette Hanchett, Salt Lake City; O. M. Clark, Portland, Ore.; Arthur S. Bent, Los Angeles; Ralph R. Merritt, Fresno; Felix M. McWhirter, Indianapolis; Henry D. Sharpe, Providence; James S. Kemper, Chicago; R. A. Long, Kansas City; Louis Lipsitz, Dallas, and Carl R. Gray, Omaha.

## Florida Embargo Is Lifted

THE embargo on freight shipments into Florida was lifted on May 17 by the American Railway Association. The order removes all restrictions placed on freight for points in the State on Oct. 29, 1925, and goods of any nature may now be freely shipped into Florida.

The embargo was ordered by the A. R. A. on account of the congestion last fall on all the State's railroads and especially at Jacksonville. In some cases permits were issued at the time, allowing shippers to receive certain commodities. With improvement of the general situation from time to time modifications were made, the last one being on April 15.

### Sterilization of Eggs

The invention of an egg-sterilizing process is announced from the laboratories of the General Electric Co., Schenectady, N. Y.

The process is said to mark the advent of the first electrically-equipped machine for treating eggs so as to keep them odorless and fresh. By this process sterilization is accomplished by passing the eggs, at the rate of 360,000 per ten-hour day, through an oil bath at 235 deg. Fahr. The oil is said to fill the pores in the eggshell and prevent air from entering.

## Erie and Lehigh Valley Cut Costs of N. Y. City Freight

THE Erie and Lehigh Valley railroads are making extensive use of motor vehicles through contracts with the United States Trucking Corp., New York. The system is reducing freight handling costs, according to road officials, and is improving service for shippers.

Only one railroad, the New York Central, has direct all-rail service into the heart of Manhattan. All the other trunk lines must depend on rail-water terminals, where cars of inbound freight are placed on car floats and towed to pier freight stations in various parts of the metropolitan area. The pier freight stations are variously located to serve different parts of Manhattan, Brooklyn, etc.

Little freight except that to and from the New York Central therefore enters or leaves the city without a water trip. The New York, New Haven & Hartford has a rail terminal at 129th Street whence freight to and from the northern part of the city is handled, but this road's freight to down points is floated down the East River to piers.

The use of trucks has come in to reduce the heavy expenses incidental to car floating and pier rental. Handling freight by motor trucks from the railroad terminals on the New Jersey side of the Hudson River instead of in cars on a car float enables the establishment of Manhattan stations at warehouses away from the waterfront—in quarters which in many instances are more convenient to shippers, and less costly.

All merchandise inbound and outbound of the Erie and Lehigh Valley roads in this area is handled by motor truck to and from Jersey City, N. J., by ferry, under the arrangement now put into effect with the United States Trucking Corp. All of it except that in direct collection and delivery passes through five inland freight stations established by the trucking corporation. The stations are operated on the ground floors of warehouses. Incoming freight is held for the consignee 48 hours free time, or if the shippers so desire it is promptly warehoused for them and is subject to their further orders at regular warehouse rates.

In addition to the motor truck service to the inland stations, the two railroads, in conjunction with the trucking corporation, offer direct collection and delivery to patrons who desire it.

This "store door delivery" service was a new one to the shippers and consignees of freight and one which they have had to learn to use before it became popular. At present, it is estimated, 57 per cent of the inbound freight is delivered directly.

### Thomas Fallon Dies

Thomas Fallon, for fifty years with the New York Dock Co., died on May 7 at his home in Brooklyn.





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We seek the cooperation of all warehousemen in making it complete and serviceable to the industry. If there is any article that you frequently purchase that is not listed in this "Buyers' Guide" please tell us about it.

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**R**EMEMBER this — whether your trucks are delivering two tons a day or twenty tons, such cost items as wages, interest and insurance are constant.

By making every 'truck hour' more productive because of short wheelbase handiness each of the thousands of Autocars you see on the streets is cutting the cost of hauling per 'truck hour'.

Watch how quickly the shorter Autocar works its way through crowded traffic. Notice how easily it gets into small, congested places, delivers its load and is off again.

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either or both - as your work requires

WHEN WRITING ADVERTISERS MENTION DISTRIBUTION AND WAREHOUSING



## Walter C. Reid Is Guest at Banquet on Attaining Age of 67 Years

*Furniture Warehousemen of Six States Assemble at Pennsylvania Hotel to Pay Homage to Industry's "Dean"*



*At the guest table, left to right: William T. Bostwick, secretary New York Furniture Warehousemen's Association and secretary arrangement committee; Charles S. Morris, past president National Furniture Warehousemen's Association and chairman arrangement committee; Walter C. Reid, the guest honored on his birthday; Charles R. Saul, toastmaster; Ernest H. Milligan, president New York F. W. A.; John G. Neeser; Harry W. Wastie, vice-president New York F. W. A.*

**W**ALTER C. REID, "dean of the household goods warehouse industry" and vice-president, general manager and active operating head of the Lincoln Safe Deposit Co., New York City, was sixty-seven years old on May 15, and on the evening of that date he was the guest of honor at a banquet tendered by his friends on behalf of the industry in the roof garden of the Hotel Pennsylvania in New York. Storage executives were present from Delaware, Maryland, Massachusetts, New Jersey, New York and Pennsylvania, and the many familiar faces were reminiscent of the social activities of a real convention.

The toastmaster was Charles R. Saul, president of the Columbia Storage Warehouse, New York. Mr. Saul and Mr. Reid are the two survivors of the little band of pioneers which organized the New York Furniture Warehousemen's Association in the board room of the Lincoln company nearly thirty years ago.

While "the gang" sang "For He's a Jolly Good Fellow" Mr. Reid was escorted into the banquet hall by Mr. Saul and Charles S. Morris, president of the Metropolitan Fireproof Warehouse, Inc., and chairman of the committee which arranged the affair. After the banquet, speeches were made by Mr. Saul, Mr. Morris, Ernest H. Milligan, president of the New York F. W. A. and treasurer of Lee Bros., Inc., New York; Walter E. Sweeting, president of the Atlas Storage Warehouse Co., Philadelphia; Harry W. Wastie, manager of the Brooklyn Warehouse & Storage Co., Brooklyn; John G.

Nesser, president of the Manhattan Storage & Warehouse Co., New York; Thomas F. Murray, president Day & Meyer, Murray & Young, Inc., New York; Alexander Gaw, secretary of the Lincoln company; Robert M. Ferguson, specialist in warehouse and van insurance, and Mr. Reid, who reminisced regarding his warehousing career.

Telegrams of congratulation were read from Grant Wayne, manager of the West End Storage Warehouse, New York; Martin H. Kennelly, president of the Werner Bros. Fireproof Storage Co., Chicago; James F. Keenan, president of Haugh & Keenan Storage & Transfer Co., Pittsburgh, and treasurer of the National Furniture Warehousemen's Association; Floyd L. Bateman, Chicago, president of the Trans-Continental Freight Co., and C. C. Stetson, president of the Fidelity Storage & Transfer Co., St. Paul, Minn.

"We have met here together," Mr. Morris said in his talk as the committee's chairman, "to do homage and pay tribute to one whom we take special pride and delight in honoring. We take this gathering of his friends as a pleasant method by which we may register our regard for Walter Reid, our joy upon his return to good health, and our appreciation for his tireless efforts on behalf of the business in which we are all engaged. . . .

"He was a pioneer in the warehouse business as we know it today—a pioneer in association work and the collective effort for the general good of all, and all present-day activity is predicated on

the modest yet determined effort begun by a small but progressive band of men called together by our guest almost thirty years ago. . . .

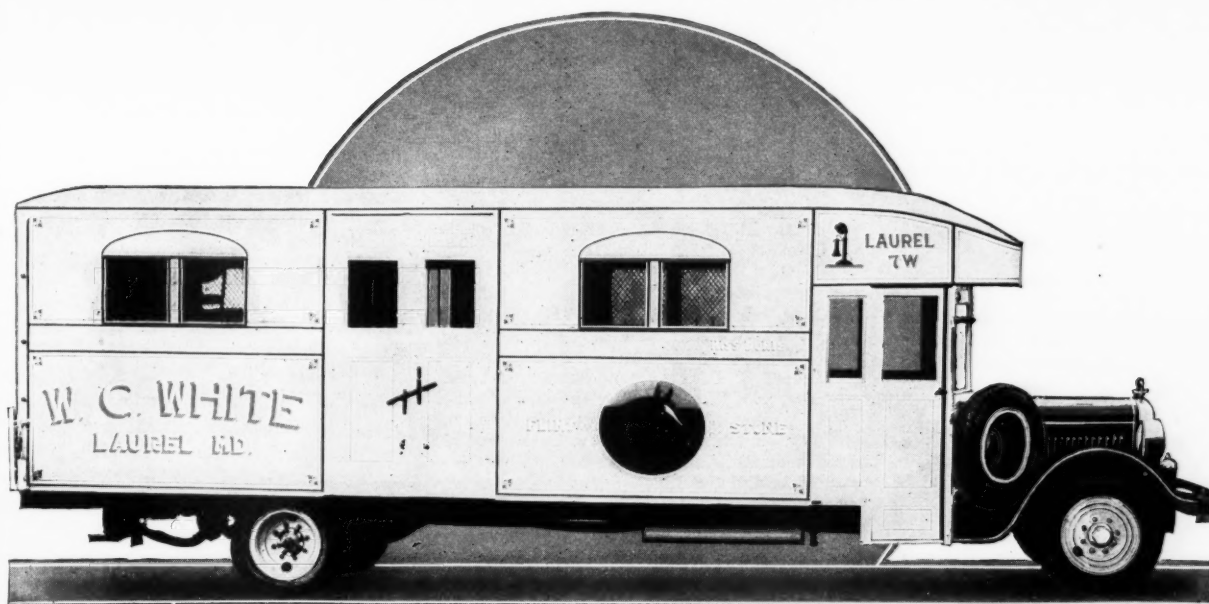
"Walter Reid is to our industry what Edison is to electricity, Bell to the telephone, Morse to the telegraph, Selden to the gasoline vehicle, Gutenberg to printing—pioneers all of them in their respective lines, as our guest has pioneered in our industry for business betterment.

"It is no exaggeration to state that all associations in connection with the household goods storage business—local, State, regional and national—owe a debt to the foresight of him whom we feel so proud to honor tonight. He has earned and deserves our homage."

Turning to the guest, Mr. Morris said:

"Walter, this gathering speaks to you of the high place you hold in the hearts of your fellow men, the esteem in which you are held by all who know you, and the appreciation which is felt for your many years of associational activity, and I am certain that I voice the hope of all that you will continue in the best of health for many years to come, that we will still have the benefit of your valuable experience and that your wise counsel will be a guide and an inspiration."

*Timely in connection with the dinner tendered to Mr. Reid is a sketch of the life of the guest, published beginning on page 52 of this month's issue of "Distribution and Warehousing."*



**W. C. White, Laurel, Md., transports race horses valued at thousands of dollars each.**

**He needed a new horse van. One that was dependable, safe, speedy and with a record for low operating and maintenance costs.**

**Mr. White bought a RUGGLES Model 70 Big Six Chassis Horse Van. It met all his requirements.**

**RUGGLES, with its modern body building plant, offers you every co-operation in the design and construction of bodies for your particular hauling needs and builds them complete on the well known RUGGLES Bus Van Chassis.**

Write us about your requirements and we  
will gladly give you complete information  
on the RUGGLES line.

**RUGGLES MOTOR TRUCK COMPANY**

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# RUGGLES

IT'S A GOOD JOB

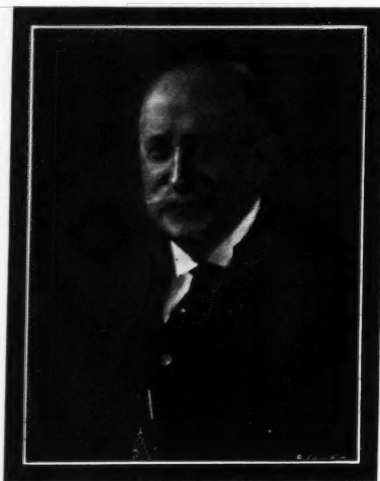
WHEN WRITING ADVERTISERS MENTION DISTRIBUTION AND WAREHOUSING

## Peter P. Terhune Is Dead; Victim of Motor Car Mishap

PETER P. TERHUNE, secretary of the Bowling Green Storage & Van Co., New York City, and one of the veteran storage executives known in the industry throughout the country, was killed by an automobile in downtown New York on May 13. He lingered a few hours after the car struck him and exonerated the boy driver from all blame.

In the best of health at the time of his passing, Mr. Terhune was looking forward to attending the testimonial dinner given his friend Walter C. Reid two days later in New York. His death cast the only shadow at the Reid dinner, at which Mr. Reid's hosts stood in silence for a few moments as a mark of tribute. Charles S. Morris, a past pres-

### Peter P. Terhune



1348-1926

ident of the National Furniture Warehousemen's Association, spoke a eulogy, saying in part:

"It is but fitting that we gathered here pay a last tribute to one whom we all loved so well. In the passing of Peter P. Terhune each of us has lost a friend. . . . He was a man honest, upright, loyal to his friends, true to a trust and sincere in every undertaking. . . . He was a splendid character, embodying a sweetness and a quietness of personality that mirrored an honest soul, dependable in friendship, staunch and active in every stress. He held a business poise and ability which gave him the laurels of success and the undying friendship of those who knew him. To my way of thinking the highest tribute that can be paid to him is that which in all sincerity I can say here: 'The world is better for his having lived.'"

A familiar figure at various conventions of the industry, Mr. Terhune was born in Paterson, N. J., in 1848. He received his early education in private schools, and his first position in the commercial world was with the Erie railroad.

Virtually all his life was spent in the transportation business. After leaving the Erie he was connected with the Allan State Line and later with Sanderson & Sons, agents of the Phoenix Line, where he was freight manager.

On July 1, 1907, he entered the firm of Williams & Terhune and also became secretary of the Bowling Green Storage & Van Co., of which Mr. Reid is president. Mr. Terhune served continuously in that position up to the time of his death.

Services were held in Grace Church, New York, on May 16 and burial took place at Cedarlawn Cemetery, Paterson.

Mr. Terhune is survived by his brother, Albert D. Terhune, who is assistant secretary of the Bowling Green company.

At the time of his death Mr. Terhune was a member of the New York Produce Exchange, the Holland Society of New York, and the Independent Order of Odd Fellows in Paterson.

## Hearings Are Begun on Motor Truck Applications in Minnesota

HEARINGS by the Minnesota Railroad and Warehouse Commission, which began in St. Paul on April 20, in which 37 motor truck companies, including many public warehouse firms, seek certificates of convenience and necessity under the State's 1925 motor vehicle control Act promise to continue some time, as adjournment was taken until a date in May.

This is distinctly a controversy between the truckers and the railroads jointly. The Great Northern Railway Co. has defined its position in opposition to long distance truck hauls. The Northern Pacific, Milwaukee, Omaha and Rock Island roads are asking interpretation of the Act by the Commission to prevent duplication of service. All of the roads have agreed there is necessity for limited motor truck freight service. The Great Northern would have the service limited to 30 miles.

In all, 74 truck companies have applied for permission to operate over 6000 miles of the roads of the State; and 37 of them are operating out of the Twin Cities, over 4000 miles, or propose to operate.

The position of the motor truck operators is that this sort of service is a means of protecting jobbing and wholesale interests against increased rail freight rates. This was brought out in testimony by Joseph Edell, traffic manager for the Murphy Transfer & Storage Co., Minneapolis, one of the major companies in the hearings. He said the railroads have pending applications for from 30 to 40 per cent rates increases to a large part of the State. Minnesota's jobbing business had been built up, he declared, largely on the basis of favorable freight rates on shipments from the Twin Cities, giving an advantage over St. Louis, Chicago and Milwaukee. The truck rates were now lower, he said, than those provided in the recent Fargo and Watertown rate orders, and the ser-

vice was preferred generally because of the store door feature.

Alex L. Janes, assistant general counsel for the Great Northern, said truck service paralleling the railroads would tend to increase freight charges on farm products.

The first hearing was on the application of the John B. Bernier Co., operating between the Twin Cities and Forest Lake, and of the St. Paul-Minneapolis Overland Express, operating to Stillwater, Minn. E. R. Weiss, of the latter company, said shippers demanded this auxiliary service and that, although trucks did not offer refrigerator or heated service, the time between pick-up and delivery was so short that perishable goods were shipped in safety. He said this truck freight service was on the basis of the American Express service to the railroads, which, although higher than the freight service, was generally used.

Charles T. Murphy, counsel for the Murphy Transfer & Storage Co., which proposes 10 runs—one the so-called house moving run, and nine fixed routes, some or all of which may parallel other truck routes—said truck service was convenient and necessary in the territory the company purposes to serve, irrespective of the service of other carriers. The company was equipped, he declared, to perform this service efficiently. A coordinated service centering in the Twin Cities was essential and would facilitate economical freight movement, he said, and that private trucks were making inroads on railroad freight revenues as well as common carrier trucks.

H. C. Mackall, attorney for 20 truck lines, contended that truck service conformed to newest methods of doing business and eliminated three to five handlings in door pick-ups. He contended, also, that there was not a complete duplication of service, as rail carriers did not perform the service offered by trucks.

### Oneida in Production Again

The Oneida Manufacturing Co., Green Bay, Wis., makers of heavy duty motor trucks, is again actively bidding for business. The company has been engaged only nominally in manufacture for the past two years but is now conducting an aggressive selling effort to recapture the place which Oneida trucks held in the automotive industry from 1917 to 1923.

Few changes have been made in the models. All-steel, all-weather drivers' cabs, and complete electrical equipment, have been added to the standard equipment. Models are rated 1½, 2¼, 3½ and 5-ton capacity.

M. W. Kiley, who is piloting the company, has announced that the new dealer organization is made up in large part from former Oneida dealers throughout the country.



# Kelly Kats always arrive on time

Moving light or heavy loads, the truck equipped with Kelly Kat tires always arrives on time. The difficulties of the road that so often cause delays when ordinary solid tires are used, hold no terrors for Kelly Kats. So long as the engine functions, these tires will push their load steadily forward over any kind of road surface.

The side vents, originated and perfected by Kelly, give Kelly Kats a firm grip on sand, mud or rain-greased pavements. Over old roads, new roads or tracks that are hardly roads at all, your trucks, if equipped with Kelly Kats, will travel safely and reach their destinations on time.

Hard work doesn't hurt Kelly Kats. They last so long that they bring mileage costs way down below those of the ordinary run of truck tires.

Repair bills are also lowered by Kelly Kats. The thick, resilient rubber gives 50% more cushioning and protects the engine from being pounded into the repair shop by the racking jolts and jars of uneven roadways.

## KELLY-SPRINGFIELD TIRE CO.

250 West 57th Street

New York, N. Y.



Ora Stafford, Springfield, Ohio, operates four large vans like the one above. All four vans are Kat equipped, because Mr. Stafford knows from experience that Kelly Kats will give better mileage and at the same time enable him to keep his trucks on schedule.



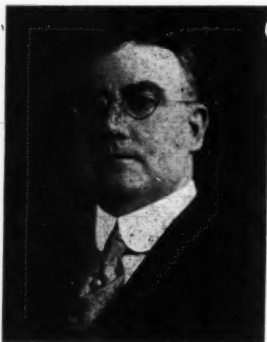
WHEN WRITING ADVERTISERS MENTION DISTRIBUTION AND WAREHOUSING

## Poole Elected President of Quincy Market Company

**I**MPORTANT changes in the personnel of the officers of the Quincy Market Cold Storage & Warehouse Co., Boston, are announced almost coincidental with the departure, on a pleasure trip to Europe, of George S. Lovejoy, long manager of the company's general storage department and recently retired on a pension after a serious illness. Gardner Poole, who is president of the American Warehousemen's Association, was on May 18 elected president of the company. Some weeks previously he had been made vice-president following his resignation as president of the Commonwealth Ice & Cold Storage Company, Boston.

Charles H. Farnsworth, whom Mr. Poole succeeds as president, was elected

### Gardner Poole



*Elected president Quincy Market Cold Storage & Warehouse Co., Boston*

chairman of the board of directors. New directors elected are Mr. Poole, Odin C. Mackay, manager of the cold storage department; B. Willard Leavitt and Francis B. Mead.

William M. Lovejoy, youngest son of George S. Lovejoy, tendered his resignation, effective June 1, as superintendent of the company's Albany Terminal Stores to take the position of manager and operating executive of the recently reorganized Atlantic States Warehouse & Cold storage Co., Springfield, Mass.

Gardner Poole's rise to the presidency of one of the largest warehouse companies in the world has been achieved by dint of close application and intelligent study of problems involved in the public storage business.

### Mr. Poole's Career

Born in Gloucester, Mass., on Jan. 29, 1877, Mr. Poole was the son of a seafaring man, and that fact, together with the nautical atmosphere for which Gloucester is famous, led the boy to enter the fishing industry. In this work he became a national figure, being considered today an authority on the distribution and refrigeration of sea food.

His only education was in the public schools of Gloucester and at the Bryant

& Stratton Commercial School in Boston, where he took a business course that enabled him to grasp and solve problems of the industrial world.

Early in life Mr. Poole went west and settled on the Pacific Coast, first in Seattle and later in Tacoma, where he accumulated a wide experience in merchandising and warehousing various products, principally fish. His first executive position in the warehouse business was in 1903, when he assumed the management of the cold storage department of the Pacific Cold Storage Co. in Tacoma. There he remained for six years.

### His War Services

In 1909 he returned east and became identified with the fish commission business in Boston, handling frozen products from Pacific Coast points.

In 1916 he was elected president and manager of the Commonwealth Ice & Cold Storage Company, continuing in that position for ten years until his resignation this past March to go with the Quincy Market company as vice-president.

During the World War Mr. Poole served as a "dollar-a-year" man with the fisheries section of the Government's Food Administration in Washington, D. C. In 1924 he represented the U. S. Department of Commerce as an official observer at the International Congress of Refrigeration in London.

For many years Mr. Poole was active in the affairs of the American Warehousemen's Association, serving as chairman of various important committees and doing much to further the organization's progress, particularly in cold storage warehousing. During 1919 and 1920 he headed the cold storage division. In 1921 he was elected the association's vice-president, serving in that office until 1924, when he was chosen president, and has since continuously held that position.

Mr. Poole is a director of the Beacon Trust Co., Boston; treasurer of the Bernitz Furnace Appliance Co., Boston; a director of the American Association of Ice & Refrigeration; a member of the Boston Chamber of Commerce, the Boston City Club, and the Massachusetts Warehousemen's Association, and is a 32nd degree Mason and a Mystic Shriner. He is married and has three sons. The Poole home is in Cambridge, Mass.

### Lovejoy Long in Industry

William M. Lovejoy, who goes with the Atlantic States company in Springfield, has long been identified with warehousing. After being graduated from the schools in Somerville, Mass., he entered the employ of the Quincy Market company in 1907 to assist his father. For six years he was superintendent of the company's Charles River Stores, for four years superintendent of the company's Constitution Stores, and for the past eight years superintendent of the Albany Terminal Stores. A brother, George H. Lovejoy, is superintendent of the Charles River Stores.

## Meikleham, Rowing Referee, Honored by Harvard and Yale

**G**RADUATES of Harvard and Yale representing classes as far back as '74 at Harvard and '65 at Yale assembled at the Hotel Biltmore in New York City recently to honor a man widely known in the household goods warehouse industry—William A. Meikleham, vice-president and treasurer of the Manhattan Storage & Warehouse Co., New York.

Mr. Meikleham is famous in sporting circles as referee of most of the Harvard-Yale boat races. With the exception of a few years he has refereed at these regattas throughout the past thirty-five years, and he will be on this job when the coming Crimson-Blue races take place in June at New London, Conn.

The Meikleham dinner marked the first time in the history of the two universities that the rival athletes gathered for a common purpose. Several hundred of the 1200 living crew men of the two institutions attended.

### Was a Crew Man

The guest's qualities were praised by various speakers including Arthur T. Hadley, former president of Yale, who was the toastmaster; and Francis Peabody, Harvard '78, who rowed for Harvard in the famous boat of that year.

Although Mr. Meikleham's claim to rowing fame is in his official capacity at the annual regattas at New London, he is himself a member of the class of '86 at Columbia and was a member of the Columbia crew of that time.

### Reed Bekins Returns

Reed J. Bekins, treasurer of the Bekins Van & Storage Co., San Francisco, passed through New York on May 23, 24 and 25 en route to the California city after a honeymoon trip in European countries. Mr. Bekins was married on Feb. 24 to Miss Ida Rainey, daughter of William Rainey, a San Francisco contractor.

### "Telling the Public"

Melville B. Bowen of the Midland Warehouse & Transfer Co., Chicago, is author of an article—"Warehouses Play Important Role in Industry Service"—in a recent issue of Chicago's *Central Manufacturing District Magazine*. The text points out how loss of time ordinarily incurred by freight congestion and the added cost of overhead are cut by public warehousing.

### New Cleveland Company

The Cleveland Bonded Warehouse Co., located at 952 Union Trust Building, Cleveland, has been chartered with a capital of 3000 shares of stock, no par value, to establish, maintain and conduct merchandise warehouses. The incorporators are Donald B. McMullen, James F. Walsh, Mark A. Copleland, Fletcher R. Andrews and Marion E. Epler.



## "We Always Go and Always Get There"—

Says C. C. Lincicome, Prop., U. S. Transfer and Storage Co., Marietta, Ohio

Mr. Lincicome, a veteran in local and long distance transportation, is first, last, and all the time an enthusiast in International haulage. He has owned nine International trucks, and was the first International owner in Eastern Ohio where there are now many hundreds of Internationals. His International trucks are used for a great variety of jobs—hauling, hoisting, towing, etc.—and he calls their service 100 per cent efficient.

The illustrations show the present-day successors to some of his old 100,000-mile Internationals. The Speed Truck is for fast, long-distance work. It makes frequent trips to Columbus, O., making the 272-mile round trip in a day and night; and makes the Cleveland 526-mile round trip in two

days. He goes heavily loaded both ways whenever possible. The loaded truck gives him 15 miles per gallon.

The Model 63 truck illustrated is for heavy-duty work, and especially for hauling casings and equipment to the oil fields. Mr. Lincicome says, "This truck has gone many places where others have refused to go. We always go and always get there. Tractors have pulled us out of 3-feet of mud, but you can't blame the truck for that. We have had this 3-ton truck a year and she has gone about 30,000 miles. And service! Year after year I have got such service from your branch and dealer at Parkersburg as I have never heard of for other trucks or any other product whatsoever.

*The International line includes the Special Delivery, 1-ton and 1½-ton Speed Trucks, Heavy-Duty Trucks ranging from 1½-ton to 5-ton maximum capacities, Motor Coaches for all requirements, and the McCormick-Deering Industrial Tractor. Write for complete descriptive literature.*

**INTERNATIONAL HARVESTER COMPANY**  
OF AMERICA  
(Incorporated)

606 So. MICHIGAN AVE.

CHICAGO, ILL.

120 Branches in the United States

# INTERNATIONAL

## HARVESTER

### TRUCKS

COMPANY

WHEN WRITING ADVERTISERS MENTION DISTRIBUTION AND WAREHOUSING



## Construction, Removals, Purchases and Changes

**A B C Storage & Moving Co., Inc.**, Houston, Tex., has removed its offices to 3 No. Live Oak Street.

**Acme Transfer Co.**, St. Petersburg, Fla., has plans for a \$250,000 6-story warehouse, 125 by 160 feet, to go up on Fourth Avenue.

**Alabama State Docks Commission**, Mobile, will erect a \$250,000 warehouse, 200 by 400 feet.

**Almond Growers' Association**, Live Oak, Cal., will build a \$30,000 addition, 50 by 100 feet, to its present structure.

**Anheuser-Busch Ice & Cold Storage Co., Inc.**, New York City, has increased its capital stock to \$1,500,000 from \$1,000,000.

**Argonne Transfer Co.**, Los Angeles, has completed plans for the first unit of a warehouse group at 807 West 47th Street. The initial building, five stories high, will be 52 by 57 feet.

**Baltimore Port Development Commission**, Baltimore, has preliminary plans for a warehouse at Aliceanna Street and East Falls Avenue.

**Buehler Brothers**, Denver, will erect a \$25,000 warehouse at East 12th Avenue and Madison Street.

**Buena Fruit & Cold Storage Co.**, Buena, Wash., is rebuilding its cold storage and refrigerating plant recently wrecked by fire.

**Bush Terminal Co.**, New York City, has awarded a contract for two 8-story warehouses at its South Brooklyn property. Each is estimated to cost \$700,000.

**Chickasha Ice & Cold Storage Co.**, Chickasha, Okla., has completed plans for a 35,000 addition.

**Chino Walnut Growers' Association**, Chino, Cal., has plans for improvements to its warehouse, to cost about \$25,000.

**Citizens Ice Co.**, Pinellas, Fla., has preliminary plans for a \$30,000 1-story cold storage warehouse.

**Collins Northern Ice Co.**, Grand Rapids, Mich., is reported to have plans for a cold storage warehouse.

**Delta Cold Storage Co.**, Pharr, Tex., has plans for a \$30,000 cold storage warehouse, 120 by 130 feet.

**Drayage Service Corporation**, Oakland, Cal., has preliminary plans for a 1-story warehouse and freight terminal, 125 by 480 feet, at 18th and Peralta Streets.

**Greenville Mill & Elevator Co.**, Greenville, Tex., has plans for a \$50,000 warehouse.

**Hansen Storage Co.**, Milwaukee, will build an \$800,000 3-story and basement warehouse, 100 by 575 feet, at the foot of Erie Street.

**Hubbard Fruit Growers' Association**, Hubbard, Ore., is building a \$25,000 1-story warehouse.

**Indiana Terminal Warehouse Co.**, Indianapolis, has completed plans for a \$35,000 1-story top addition to its storage building.

**Inter-State Transfer & Storage Co.**, Kansas City, Kansas, has removed its offices to its new fireproof building, at 728-740 Armstrong St.

**Lathim's Transfer & Fireproof Storage Co.**, Santa Barbara, Cal., has plans for a \$150,000 5-story warehouse, 50 by 70 feet, on Cota Street.

**L. Leritz & Son**, Kansas City, Mo., is reported to be planning construction of a 5-story and basement warehouse at 44th and Main Streets.

**Liberty Storage Co.**, Winston-Salem, N. C., is said to be considering construction of a group of two to four warehouses, on South Liberty Street, to cost about \$100,000.

**Long Beach Terminal Warehouse Co.**, Long Beach, Cal., is completing plans for a \$750,000 project on a 4-acre tract of land at Long Beach Harbor. Two main buildings will comprise a 6-story cold storage structure with 80,000 square feet of floor space and there will be a 3-story building with 60,000 square feet of floor space.

**Merchants & Manufacturers Railway Warehouse Co.**, St. Louis, is having plans drawn for extensions and improvements, to cost about \$25,000, at its 1-story warehouse at 3900 Chouteau Street.

**Meteor Transport & Trading Co.**, Miami, Fla., has plans for a \$70,000 warehouse on waterfront property recently leased.

**Milwaukee Storage Co.**, Milwaukee, Wis., and Chicago, has awarded a contract for a \$150,000 5-story warehouse, 45 by 177 feet, to be built on South Water Street, Milwaukee.

**"Al" Naish Moving & Storage Co.**, Cincinnati, has preliminary plans for a warehouse at 3208 Brotherton Road.

**Northern Pacific Railroad** has plans for a \$300,000 warehouse at Division and Riverside Streets, Spokane, Wash.

**Parr Terminal Co.**, Oakland, Cal., has plans for a \$175,000 1-story warehouse, 125 by 450 feet.

**Peninsular Terminal Co.**, Miami Beach, Fla., has plans for a \$100,000 warehouse at its island properties south of the Causeway Terminal.

**Pennsylvania Railroad** is completing plans for a 2-story warehouse and express terminal and office building, to cost about \$2,000,000, at the Sunnyside yards, Long Island City, N. Y.

**Producers Cold Storage Co.**, Chillicothe, Mo., has preliminary plans for an addition to its cold storage plant.

**Radial Warehouse Co.**, Kansas City, Mo., has removed its offices from 403 New York Life Building to the Radial Building, Charlotte and Armour Road, North Kansas City.

**Reading Co.**, Philadelphia, operating the Philadelphia & Reading Railway, has preliminary plans for a storage and freight terminal in Wernersville, Pa.

**Reliable Expressing & Storage Co., Inc.**, Brooklyn, has asked bids for the erection of a 4-story addition, 65 by 85 feet, to its present structure. In the latter, alterations will be made. The improvements will cost about \$80,000.

**Salinas Cold Storage & Ice Co.**, Salinas, Cal., is installing a cold storage plant.

(Concluded on page 76)

## New Incorporations Within the Industry

**Alpine Van Co.**, Brooklyn. Nominal capital, \$3,000. Incorporators, D. Miller, J. Miller, A. K. Miller and C. B. Carlson.

**American Cold Storage Co.**, Philadelphia. Cold storage warehousing. Capital, \$5,000. L. G. Loeb is treasurer.

**Benne Brothers, Inc.**, New York City. Transfer and trucking. Nominal capital, \$5,000. Incorporators, C. Benne, E. Benne and W. Benne, Jr.

**Berlin Ice & Cold Storage Co.**, Camden, N. J. Cold storage warehousing. Capital, \$300,000.

**W. L. Blaul, Inc.**, Chicago. Transfer and trucking. Capital, 100 shares of stock, no par value. Incorporators, George C. Brandt, W. L. Blaul and Edward Blaul.

**Boenville Warehouse Co.**, Boonville, N. Y. Cold storage warehousing. Capital, \$10,000. Incorporators, August C. Huck, Charles M. Nonweiler and Edward Metz.

**Caton Transfer Co.**, Cleveland. General transferring and hauling. Capital, 500 shares of stock, no par value designated. Incorporators, M. E. Newcomer, H. B. Oakes, George W. Hazlett, M. F. Hanning and M. E. Ensign.

**City View Storage Co.**, Akron, Ohio. (New corporate name of City View Apartment & Storage Co.) Warehousing and trucking. Capital, \$8,000. Incorporators, J. Fred Smith, C. Blake McDowell and E. W. Barnes.

**Cleveland Bonded Warehouse Co.**, Cleveland. Warehousing. Capital not stated. Incorporators, George E. Murar, Isidore L. Lummeren and Bert L. Isaacs.

**Furniture Storage Warehouse Corp.**, New York City. Warehousing and trucking. Capital, 100 shares of stock, no par value. Incorporators, A. J. Halprin, A. Stoller and F. H. Schwalbe.

**Joseph-Cook Corporation**, New York City. Cold storage warehousing. Capital, \$400,000. Incorporators, G. Cook, E. Josephy and A. Josephy.

**Kane Storage Warehouse**, Chicago. General warehousing. Capital, \$1,000. Incorporators, James Kane, Jr., Louis D. David and Samuel J. Winograd.

**Bill Kneeland Motor Express, Inc.**, Springfield, Mass. Capital, \$500,000. (New corporate name of Bill Kneeland's Motor Express.)

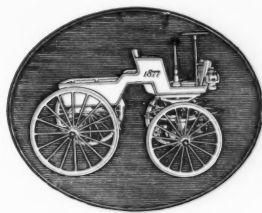
**Long Beach Terminals, Inc.**, Long Beach, Cal. Warehousing. Capital, \$1,000,000. Incorporators, John W. Hunt and A. A. Vivian, Los Angeles, and Hiram E. Knight and C. A. Martin, Long Beach.

**Lowden Warehouse Corp.**, New York City. Warehousing and trucking. Capital, \$10,000. Incorporators, M. C. Lowden, B. B. Lowden and J. L. Carty.

**Lumbermen's Credit & Warehouse Co.**, Kalamazoo, Mich. Warehousing. Capital, \$21,000. Incorporators, Leonard C. Woodruff, Cornelius W. Bierens and Hubert L. North.

**McConnell Warehouse Co.**, Chicago. Warehousing and trucking. Capital, \$250,000. Incorporators, L. Dow Nichol,

(Concluded on page 76)



*The First Selden—1877*



## Roadmaster Van Owners Say:

### Ten Important Features

**Motor,** Continental 6-cyl., 72 H.P.  
**Speed,** up to 50 miles per hour  
**Loading Space,** 15 ft. behind driver's seat  
**Loading Height,** 27" to top of frame  
**Clark** bevel gear axle  
**Brown-Lipe** 4-speed transmission  
**Radius Rods**  
**Timken** Bearings  
**Ross** cam and lever steering gear  
**Bosch** ignition

"It's the best we've ever seen. It's always ready for a hard job."

"The motor has heaps of power. It is quiet and smooth running, and on long distance hauls we lead all the others."

"We can depend upon it day in and day out without loss of time and big repair bills."

"Drivers are enthusiastic over the performance of the Roadmaster."

"Customers like the Roadmaster Van. They have confidence in its ability to handle their goods safely and quickly."

### Special Proposition to Warehouse Fleet Owners

4-Cyl. Models in 1½, 2½, 3, 3½, 4 and 5-7 Tons

## SELDEN TRUCK CORPORATION, ROCHESTER, N. Y.

### BRANCHES

Van Alst Ave. and So. Jane St., LONG ISLAND CITY, N. Y.

1121-1123 Commonwealth Ave., BOSTON, MASS.

202 So. Denver Ave., TULSA, OKLA.

WHEN WRITING ADVERTISERS MENTION DISTRIBUTION AND WAREHOUSING

## Construction, Removals, Purchases and Changes

(Concluded from page 74)

A. Santini & Sons, Inc., New York City, has awarded a contract for a \$260,000 7-story and basement warehouse, 75 by 125 feet, on Westchester Avenue.

Security Storage Co., Philadelphia, has awarded a contract for a \$150,000 3-story and basement warehouse, 50 by 230 feet, to go up on Vine Street.

Security Warehouse & Cold Storage Co., San Jose, Cal., has been granted a permit to erect a warehouse at Second Street and the Southern Pacific right of way.

Security Warehouse Co., Galveston, Tex., has plans for a \$50,000 warehouse at Avenue E and 36th Street.

Service Warehouse, Inc., Detroit, has awarded a contract for a \$125,000 3-story and basement warehouse at Clark and Porter Streets. Moores & Dunford, New York and Chicago, architects.

Somerville Warehouse Co., Boston, has filed plans for a \$55,000 1-story warehouse, 125 by 340 feet, at the foot of Clyde Street.

Struebing Bros., Los Angeles, have acquired the equipment and good will of the Westlake Transfer, 1609 West 7th Street.

Tampa City Council, Tampa, Fla., has filed plans for a \$25,000 warehouse on Peters Avenue.

Tampa Port Planning Group, Tampa, Fla., is planning to construct warehouse and terminal buildings estimated to cost in excess of \$5,000,000.

Textile Warehouse Co., Greenville, S. C., has filed plans for a \$50,000 3-story warehouse, to contain about 30,000 sq. ft. of floor space, to be erected on Rhett Street.

Union Compress & Warehouse Co.,

Memphis, Tenn., affiliated with the Federal Compress Co., is planning a \$150,000 warehouse addition at the old Navy Yard property.

United Storage & Truck Co., Pittsburgh, has filed plans for an \$18,000 addition.

## New York Dock Co. Earned a Higher Net Profit in 1925

The report of the New York Dock Co. for 1925 shows a net profit of \$610,735, after taxes, interest, depreciation, etc., equivalent, after preferred dividends, to \$1.58 a share earned on \$7,000,000 common stock. This contrasts with a net income in 1924 of \$554,031, or 77 cents a share on the common.

Net income for the opening quarter of this year was \$106,112, as shown in a statement appended to the annual report. This compared with profit of \$135,744 in the corresponding period of last year. Total revenues for the first quarter of this year reached \$744,621, as against \$815,580.

The consolidated income account for 1925 shows total revenues of \$3,381,715 and other income of \$226,802. Expenses and depreciation aggregated \$1,583,066, taxes were \$886,008, while interest charges were \$528,708. After preferred dividends of \$500,000 a surplus remained of \$110,735. Surplus in the preceding year was \$54,031.

The report, signed by D. L. Tilly, vice-president, points out that "greater activity in warehouse operations resulted in an increase in warehouse revenues of \$111,847.64 despite the fact that a substantial surplusage of storage warehouse space existed throughout the Port of New York during the entire year 1925." Warehouse revenues for 1925 totalled \$985,384.65 as compared with \$873,537.01 in 1924.

## New Incorporations Within the Industry

(Concluded from page 74)

Jr., Edward M. Quinn and George M. Sundheim.

James H. McElroy Co., Cambridge, Mass. Transfer and trucking. Capital, 200 shares of stock, no par value. Incorporators, James H. McElroy and John W. McElroy.

Newark Storage Co., Elizabeth, N. J. Warehousing. Capital, \$100,000. Incorporators, Samuel Freedman and Martin Korngut, Newark, N. J.

Packard Motor Truck Transportation Co., South Amboy, N. J. Transfer and trucking. Capital, \$25,000. Incorporators, Martin Jessen and Joseph A. Besner.

Service Stores, Inc., New York City. General warehousing. Capital, 1250 shares preferred, 2600 shares common stock, no par value. Incorporators, L. D. Kauffmann and D. Siegelman.

Spratt Trucking Co., Toledo, Ohio. General hauling of household goods and merchandise. Capital, \$10,000. Incorporators, William Spratt, Bertha E. Spratt, George S. Moss, William Purcell and Roland B. Lee.

Stevens Cold Storage Co., Worcester, Mass. Cold storage warehousing. Capital, \$15,000. Clarence G. Stevens is president and William A. Stevens is treasurer.

United Trucking Service, Inc., Newark, N. J. Transfer and trucking. Matthew F. Hopkins heads the company.

Yellow Van Transfer & Storage Co., Los Angeles. Warehousing and transferring. Capital, \$100,000. Incorporators, Fred H. Bixby of Long Beach, A. M. Brown of Pasadena and Dixwell Davenport of San Francisco.

# Let's Take the Old Family Album Out of Storage

Success Story No. 3  
Walter C. Reid

(Concluded from page 52)

the States, was drawn up—one of the highlights of the senior organization's history. And he was the first treasurer of the American Society of Refrigerating Engineers and is a former president of the New York State Safe Deposit Association.

Mr. Reid is president of the Bowling Green Storage & Van Co., a New York organization, which ships household goods to foreign countries by stowing them in the body of a van that goes with them to their destination, to be returned, loaded or empty, to its owners. He is vice-president of the Gilbert Storage Co. and a director of Dunham & Reid, Inc.

Among the humorous incidents of his career Mr. Reid recalls the storing of an educated pig—at \$5 a night. On another

occasion he was given a severe shock when, on opening a trunk on which the storage charges had not been paid, he discovered the figure of a man dressed in a sailor's uniform. The "sailor" had not been the victim of foul play, however, for closer inspection proved the figure to be a dummy from a Coney Island concession show.

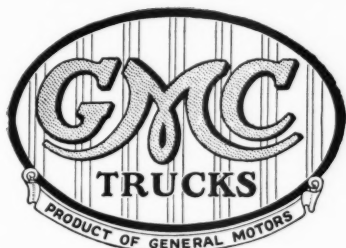
The story of another uncalled-for shipment of household effects had a less happy denouement. The consignment contained a stuffed bear, an iron chair dating from the Spanish inquisition and which had the unfortunate faculty of imprisoning in huge iron rings the arms and legs of any victim who might be lured into sitting in it.

Notices to comply with the law had

been served on the owner, and the goods were about to be sold at auction to satisfy the bill for storage. Among the contents of a trunk of silverware was a pair of dancing clogs, and these were promptly appropriated by a superstitious Irish floor hand called Maurice, who was by way of being a bit of a stepper himself. The floor was slippery, so Maurice helped himself to a generous handful of sand from a tin box among the silverware—and it was not until Maurice had given his fellow workers a lengthy exhibition of his skill that Mr. Reid discovered that the amateur entertainer had been dancing on all that was left of someone who had made a return trip from the cramatorium!—E. F.



# Power and Speed insure greater Work Capacity



In the purchase of a motor truck, *Work Capacity* will be considered first. Your truck must be powerful enough to handle its loads on the steep hills and in heavy going, without sacrificing the speed that governs its earnings.

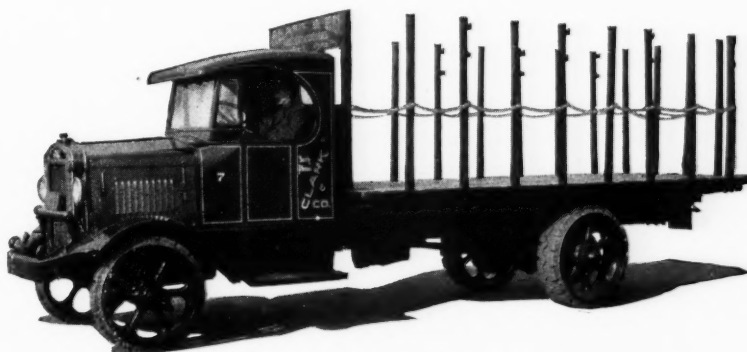
Every GMC model; from the 1 ton to the 15 ton Big Brute Tractor-Truck; is powered with an engine of greater than average capacity. Yet GMC full pressure lubrication and the dual cooling system make speed possible and safe.

In the Big Brute heavy duty models, tremendous reserve power is provided through the GMC 53 horse power Engine and the famous GMC Two-Range Transmission, without uneconomical "over-powering" or sacrificing one iota of speed.

The engineering and manufacturing standards attained by General Motors make this exceptional GMC work capacity possible—*with economy*.

The Boyd Transfer & Storage Co., of Minneapolis, recently wrote us that: "We have operated GMC Trucks for more than 10 years. Some have hauled general freight, some newsprint paper, some household goods, not only in the City but to points as far as 500 miles away.

The best comment we can make is that we continue to buy them. Our trucks must be ready to run when we want them and GMCs seem able to do so."



*Sold and Serviced Everywhere by Branches, Distributors and Dealers of*

## GENERAL MOTORS TRUCK COMPANY, Pontiac, Michigan

A DIVISION OF YELLOW TRUCK AND COACH MANUFACTURING COMPANY

GMC 1, 1½ and 2½ ton trucks  
Co GMT Co—1926

Yellow Cabs

Yellow Coaches

GMC Big Brute 3½ and 5 ton trucks

Yellow Light Delivery Trucks

GMC Big Brute 4 to 15 ton Tractor Trucks

Hertz Drivurself Cars

WHEN WRITING ADVERTISERS MENTION DISTRIBUTION AND WAREHOUSING



## *A city in itself—*

The number of Warehouses designed and constructed by Moores & Dunford, Inc., virtually comprise a city in itself as depicted in the above illustration.

Accomplishment such as this must be accompanied by knowledge of the exact requirements of scientific warehouse construction from the first line of the plans to the last finishing touch of the completed structure.

The long, successful record established by Moores & Dunford, Inc., as experts in the designing and building of warehouses comes

through years of experience that combine the understanding of the Warehouseman, the Engineer, the Architect and the Builder.

Whether you contemplate the erection of a new building or an addition to your present structure, we are in a position to render you a service that will not only **save you money** from a building standpoint but that will provide the maximum profit from that most essential requirement—greatest available storage space.

We cordially invite your inquiries and will gladly arrange for an appointment regardless of your location.

*We charge no fee for consultation and advice*

### MOORES & DUNFORD, Inc.

110 East 42nd St.

New York City

Years of specialization  
in the designing and  
planning of Warehouses.



A Moores & Dunford  
designed and built Ware-  
house means greatest  
available storage space.

# The Shippers' Index

A Guide to representative Merchandise, Cold Storage and Household Goods Warehouses, Forwarders, Terminals, and Transfer Companies, arranged by States and Towns



## "ANDY" SAYS:

THE development that has been made in advertising during the past 150 years is so well depicted in the following paragraph recently sent to me by W. S. Cushion, Vice-President of the W. R. C. Smith Publishing Co., that I am going to pass it on for others to read.

The advertisement is that of a "Jack of all trades" in Lancaster, England, who believed it paid to advertise. It took the form of a window card and reads as follows:

*"James Williams, parish clerk, sexton, town crier and bellman, makes and sells all sorts of haberdasheries, groceries, etc.; likewise, hair and wigs drest and cut on the shortest notice. I keeps an evening school, where I teach, at reasonable rates, reading, writing and rithmetic, and singing. I play the hoyboy occasionally if wanted. My shop is next door, where I draw teeth and shoe horses with the greatest skill. Children taught to dance if agreeable at 6 pence per week, by me, J. Williams, who buy and sell andirons, and coats—boots and shoes cleaned and mended. Look over the door for the sign of three pigeons. I sell good ale, and sometimes cider. Lodgings for single men. I teach jogrofy, algebray and them outlandish kind of things. A dance on Wednesdays and Fridays.*

And so it goes—even a town crier had to do his bit of advertising 150 years ago. Is there any doubt that a business man of today must treat the subject of modern advertising very seriously in order to be successful?

## ON TO TORONTO



ON June 10-11-12 the Canadian Storage & Transfermen's Association will hold its annual convention at the King Edward Hotel, Toronto.

Last year the Canadian Association met on the West Coast, much too far away for many of the eastern warehousemen in the United States to travel. When the meeting place is in the East it behooves American warehousemen who can to attend and take the opportunity to shake the hands of their Canadian contemporaries in their own country.

We remember that there are many Canadian warehousemen, members of the National and the American Associations, who frequently travel southward to our meetings.

Warehousemen everywhere are renowned for their hospitality—Canadian warehousemen are no exception to this rule and certainly Toronto is one of the places where the opportunity still holds good for all to have a very enjoyable time.

*Distribution and Warehousing* urges every Canadian warehouse operator or transferman who qualifies for membership in the Canadian Storage & Transfermen's Association to join at once, not alone for the benefits which always come from such association activity, but also for the helpful suggestions that each gives to the association of which he is a member.

"ANDY"

## CONVENTION CALENDAR

(Annual or Semi-Annual Meetings)

June 10-12	Canadian Storage & Transfermen's Association	Toronto
June 18-19	Texas Warehouse & Transfermen's Association	Corpus Christi
June 18-20	New York State Warehousemen's Association	Saratoga Springs
July 9-13	National Furniture Warehousemen's Association	Mackinac Island, Mich.
July 15-16	Merchandise Division American Warehousemen's Association	Chicago
October	Connecticut Warehousemen's Association	(To be decided)
October	Missouri Warehousemen's Association	(To be decided)
November	Wisconsin Warehousemen's Association	(To be decided)
December	American Chain of Warehouses	(To be decided)
December	American Warehousemen's Association	(To be decided)
December	Distribution Service, Inc.	(To be decided)
December	Illinois Association of Warehousemen	Chicago
December	National Distributors' Association	(To be decided)

WHEN WRITING ADVERTISERS MENTION DISTRIBUTION AND WAREHOUSING



## BIRMINGHAM, ALA.

**Charlie's Transfer Co.**

Incorporated 1903

**Distributors and Forwarders  
Storage and Hauling**

We specialize on merchandise handling.

Private siding, connecting with all railroads.

## BIRMINGHAM, ALA.

ESTABLISHED—1880

OVER 40 YEARS OF HONORABLE SERVICE

**HARRIS TRANSFER  
AND  
WAREHOUSE CO.****FIREPROOF and NON-FIREPROOF  
WAREHOUSES  
MERCHANDISE and HOUSEHOLD GOODS  
STORAGE HAULING PACKING***Prompt Service—Accurate Accounting***8 South Eighteenth Street**

Members: A. W. A., N. F. W. A., SO. W. A., ALA. T. &amp; W. A.

## BIRMINGHAM, ALA.

**Hess-Strickland Transfer & Storage Co.**General Merchandise, Furniture  
and Household Goods StorageDistribution of Pool Cars Given Special Attention—Motor Trucks in  
Addition to Wagon Equipment—Track Connections with All Railroads.

## BIRMINGHAM, ALA.

**Wittichen's  
Fireproof Warehouse**Operated by  
Wittichen Coal & Transfer CompanyMembers  
Southern  
Warehousemen's  
Assn.  
Ala. Warehouse  
& Transfer  
Assn.**POOL CAR DISTRIBUTORS—**Hauling, Packing Household Goods and  
Merchandise.Free switching from all Railroads.  
Warehouse and Office on Southern  
Railroad. 2329-31 First Avenue, No.

## MONTGOMERY, ALA.

L. J. MOELLER, Pres.

**STORAGE—FORWARDING—DISTRIBUTING**Warehouse on Western Railway of Alabama.  
Bonded. Sprinkler System. Low Insurance.ALABAMA'S LARGEST MERCHANDISE WAREHOUSEMEN  
**MOELLER TRANSFER & STORAGE CO.**

210-220 Coosa St. P. O. Box 552.

PROMPT SERVICE

SATISFACTION GUARANTEED

Members: } American Warehousemen's Association  
Southern Warehousemen's Association

## MONTGOMERY, ALA.

**LEADING WAREHOUSEMEN****DISTRIBUTION—HAULING  
PACKING — STORAGE of  
HOUSEHOLD GOODS  
MERCHANDISE and AUTOMOBILES**TWO LARGE WAREHOUSES—PRIVATE SPUR  
LARGE FLEET OF MOTOR TRUCKS**ALA. MOTOR TRANSFER CO.**

COR. LAWRENCE and RANDOLPH—132 LEE

## MONTGOMERY, ALA.

L. J. MOELLER, Pres.

Stanford Transfer and Warehouse Co., Inc.

Household Goods Exclusively

MOVING STORAGE PACKING and SHIPPING  
3 Jefferson Street

## PHOENIX, ARIZONA

**ARIZONA STORAGE and DISTRIBUTING Co.**  
MERCHANDISE and HOUSEHOLD GOODS  
POOL CAR DISTRIBUTION

Lowest Insurance Rates

Trucking Service

18 SOUTH CENTRAL

N.F.W.A.—A.W.A.

## TUCSON, ARIZONA

**Tucson Warehouse & Transfer Co.****POOL CAR DISTRIBUTORS****FIREPROOF STORAGE****26 North Scott St.****Tucson, Arizona**

## FORT SMITH, ARK.

**O.K. TRANSFER & STORAGE CO.**Rogers Ave. and 2nd St.  
FORT SMITH, ARK.

Storing—Shipping—Moving

Pool-Car Distributing a Specialty



## LITTLE ROCK, ARK.

**Commercial Warehouse Co.****801-7 East Markham St.****"A COMPLETE SERVICE"**Modern Offices—Storage—Drayage & Distribution  
Located in the heart of the wholesale and  
shipping district*Fireproof Sprinklered Low Insurance*


Private Railroad Siding

Quick Service

LITTLE ROCK, ARK.

**Terminal Warehouse Co.**  
**Storage—Drayage—Distribution**

85,000 Sq. Ft. Warehouse Space  
Fireproof Sprinklered  
Free Switching from All Railroads



HOLLYWOOD, CAL.

8421 Santa Monica Blvd.  
**BEKINS**  
Our New Fireproof Depository Serves Hollywood and Beverly Hills  
**VAN & STORAGE CO.**  
MOVING SHIPPING PACKING STORING

HOLLYWOOD, CAL.

LOCATED IN THE CENTER OF RESIDENTIAL LOS ANGELES  
**Hollywood Storage Company, Inc.**  
"FIREPROOF"  
Car Distribution Private siding P. E. RR.  
We have Los Angeles terminal rates  
Consign to Hollywood via U. P., S. P. or A. T. & S. F. RR.  
1025 N. Highland Ave., Hollywood, Calif.

TEXARKANA, ARK.

**DISTRIBUTION**  
**TEXARKANA**  
1882 Complete Service  
**HUNTER**  
TRANSFER CO.  
**ARK-TEX.**  
**STORAGE**

LONG BEACH, CAL.

**CITY TRANSFER & STORAGE CO.**  
140 PACIFIC AVENUE Est. 1903 LONG BEACH, CALIFORNIA  
**HOUSEHOLD GOODS and MERCHANDISE**  
Removals—Packing—Forwarding—Distributing  
Warehouse Spur—Union Pacific—Southern Pacific and Pacific Electric  
MEMBERS: California Warehousemen's Assn.  
Pacific Coast Furniture Warehousemen's Assn.  
National Furniture Warehousemen's Assn.  
San Pedro—DOCK CONNECTIONS—Wilmington  
SAFETY SERVICE

BERKELEY, CAL.

**DRIVER**  
**STORAGE CO.**  
Formerly  
**STUDENTS TRANSFER & STORAGE CO.**  
Distributors of Pool Cars  
Fireproof Depositories  
**SHATTUCK AVE. AT WARD ST.**

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**Long Beach Transfer & Warehouse Co.**  
Incorporated 1907  
**Household Goods Our Specialty**  
Removals, Storage, Packing, Forwarding and Distributing  
Private Siding—Union Pacific Railroad  
MEMBER: National Furniture Warehousemen's Association.  
Pacific Coast Furniture Warehousemen's Association.  
We send our check promptly on collection of your charges.  
**Only Fireproof Warehouse in Long Beach on a Private Siding**

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Monterey at Van Ness Ave., Fresno, Cal.  
**BEKINS**  
VAN & STORAGE CO.  
MOVING SHIPPING PACKING STORING

San Francisco, Cal.  
Los Angeles, Cal.  
Oakland, Cal.  
Seattle, Wash.  
Tacoma, Wash.  
Portland, Ore.  
Vancouver, B. C.  
Sioux City, Iowa  
Omaha, Nebr.  
Hollywood, Cal.  
Sacramento, Cal.

FRESNO, CAL.

**Valley Van & Storage Co., Inc.**  
Private Spur  
Distributors of Pool Cars of  
Household Goods, Machinery and Merchandise  
Office: 842 Broadway, Fresno, Calif.

LOS ANGELES, CAL.

**Birch-Smith Fireproof Storage Company**  
3601-31 So. Grand Ave.  
A. J. GATTER, Mgr.  
We Move—Store—Pack and Ship Household Goods  
Pool Car Distributors  
Private Spur Track  
Reciprocity Our Policy  
Member N. F. W. A. and P. C. F. W. A.

LOS ANGELES, CAL.

1335 So. Figueroa St., Los Angeles, Cal.

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VAN & STORAGE CO.  
MOVING SHIPPING PACKING STORING

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Tacoma, Wash.  
Portland, Ore.  
Vancouver, B. C.  
Sioux City, Iowa  
Omaha, Nebr.  
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LOS ANGELES, CAL.



**CALIFORNIA TRUCK CO.**

INCORPORATED 1884

**Pool Carload Distributors**

Handling goods destined to points in  
**SOUTHERN CALIFORNIA and ARIZONA**  
and to  
**TRANS-PACIFIC PORTS**  
P. O. BOX 570, ARCADE STATION

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Piano Moving—Baggage Delivered—Expert Packing and Shipping  
At Reduced Rates

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Located in the Center of Downtown  
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**COLYEAR'S**  
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MAIN OFFICE—415 S. San Pedro St.

Warehouse No. 2  
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Warehouse No. 4  
540 S. Alameda St. Sprinkler Equipped.

Member { American Warehousemen's Association  
Nat'l Furn. Warehousemen's Association  
Pacific Coast Warehousemen's Association  
Los Angeles Warehousemen's Association

Moving—Packing—Storing—Shipping  
Pool Car Distribution—Household Goods—Merchandise  
Twenty-Two Years of Dependable Service

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**Fidelity Fireproof Storage**

Packing, Moving, Shipping of household goods,  
distribution of pool cars to and from everywhere.

WASHINGTON & ARAPAHOE ST.

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Consign to Hollywood, center of Resi-  
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**Hollywood Storage Company, Inc.**  
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Send for map showing why our location saves money on shipments to residential  
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Car Distribution Private Siding P. E. R. R.  
We have Los Angeles Terminal Rates

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**Centralized Distribution**  
of  
**Household Goods and Merchandise**

By consigning your shipments for Hollywood and  
Beverly Hills as well as Los Angeles direct to us you  
will save many arguments which mean dissatisfied  
customers.

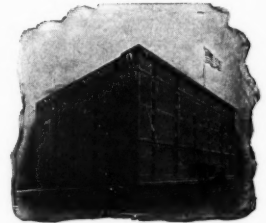
A Complete Service.

**Los Angeles Warehouse Company**  
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**Consign to**  
**LYON**

Two modern Fireproof  
Warehouses in residential  
districts — private spur  
tracks. Prompt service and  
collections.



**Lyon Fireproof Storage Co.**  
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**Modern**  
**Distribution**  
**of**  
**Merchandise**

**Service**  
**That Wins**  
**Trade for**  
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**Pacific Coast Terminal**  
**Warehouse**

820 McGarry St.

Spur Tracks—Fireproof  
Insurance Rate 17 Cents

Interurban Truck Station for  
Store Door Delivery in So. California

Trapcars to Depots Daily

Inventories and Stock Transaction  
Reports Forwarded Promptly.

Cartage Service—Prompt Deliveries  
Office and Desk Space Rented

Chas. G. Munson, Vice-Pres. and Operator



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MARK DESTINATION

The Heart of The Best Residential District

**HOLLYWOOD**  
*and Save*  
Los Angeles  
7 MI. HAUL

**PREMIER**  
FIREPROOF STORAGE CO.  
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VAN & STORAGE CO.  
MOVING SHIPPING PACKING STORING

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Seattle, Wash.  
Tacoma, Wash.  
Portland, Ore.  
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OAKLAND, CAL.

**HOWARD TERMINAL**  
Warehouses situated at Tide-water adjacent to Piers.  
Economy and advantage afforded Jobbers and Merchants.  
From Ship to Warehouse  
or  
From Warehouse to Ship without transportation charge.  
First and Market Streets  
Oakland, California

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We Solicit Your Shipments and Pool Car Distribution

**PRUDENTIAL**  
STORAGE AND MOVING CO.  
OFFICE: 941 W. 16th ST.  
THREE WAREHOUSES—PRIVATE R.R. SIDINGS  
Members Pacific Coast Furniture Warehousemen's Association  
National Furniture Warehousemen's Association

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NO TASK TOO GREAT

**LAWRENCE**  
WAREHOUSE COMPANY  
NO DETAIL TOO SMALL  
5TH AND KIRKHAM STREETS, OAKLAND

AL. T. GIBSON, Pres.

LOS ANGELES, CAL.

**STORAGE DISTRIBUTION CARTAGE**  
Modern Fire-Proof Warehouses—Free and Customs Bonded at  
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Insurance Rate as Low as 18c  
Space Leased for Private Warehouse—Office or Desk Space Provided—Cotton Warehouses and Compresses at Port of Los Angeles.  
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I. E. Blohm, Vice President.....Los Angeles, California  
San Francisco Office...No. 9 Main Street

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Capital V. & S. Co. owned and operated by

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Fresno, Cal.  
Hollywood, Cal.  
Los Angeles, Cal.  
Seattle, Wash.  
Tacoma, Wash.  
Portland, Ore.  
Vancouver, B. C.  
Sioux City, Iowa  
Omaha, Nebr.

SACRAMENTO, CAL.

**C. L. and L. C. L. Shipments**  
for  
Delivery and Distribution  
Given Personal Supervision

**ELECTRIC**  
**TRANSFER AND STORAGE CO.**  
Three Warehouses—Private Siding  
Main Office 914—8th Street

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**"When Shipping West, Ship Westland"**  
WESTLAND WAREHOUSES, located in heart of Central Manufacturing District, on tracks of Los Angeles Junction Railway (a neutral belt line road connecting with all main lines at through rates), offer you complete warehouse service in modern fireproof structures at reasonable rates. Lowest insurance rates in city. Office and display desk space for lease.  
**Westland Distribution & Storage Warehouse Co.**  
Central Manufacturing District Los Angeles

LOS ANGELES, CAL.

The Most Up-to-Date Service for Los Angeles' Most Exclusive Residential Section.

**WILSHIRE FIREPROOF STORAGE CO.**  
116 So. Western Ave., Los Angeles  
Complete Facilities for  
Freight Forwarding and Distributing of  
HOUSEHOLD POSSESSIONS  
National Furniture Warehousemen's Assn.  
Members: Pacific Coast Furniture Warehousemen's Assn.

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**COAST TO COAST**  
—FASTEST WATER SERVICE  
NEW YORK—CALIFORNIA  
VIA  
**PANAMA PACIFIC LINE**

**SHIP THROUGH**  
**National Freight Forwarding Co.**  
FOR ALL POINTS IN  
NEW YORK  
NEW JERSEY  
CONNECTICUT  
HAWAII  
San Diego Office:  
Kettner Boulevard at B Street  
C. C. TEMPLE, Manager

**SAN FRANCISCO, CAL.**

13th & Mission Sts., San Francisco, Cal.

**BEKINS**  
VAN & STORAGE CO.

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Tacoma, Wash.  
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Sioux City, Iowa  
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Sacramento, Cal.

**SAN FRANCISCO, CAL.**

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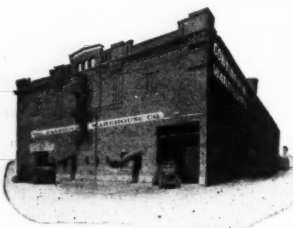
**THE HASLETT WAREHOUSE CO.**

60 CALIFORNIA ST., SAN FRANCISCO

Pioneer in the Warehouse and Distribution Business  
Operating in the Logical Distribution Center of the Pacific Slope with  
Complete Warehouse and Drayage Facilities  
Low Insurance Rates

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Member American Warehousemen's Ass'n.  
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**Storing and Dis-  
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chandise Our  
Specialty**

Let us handle your  
San Francisco ship-  
ments.

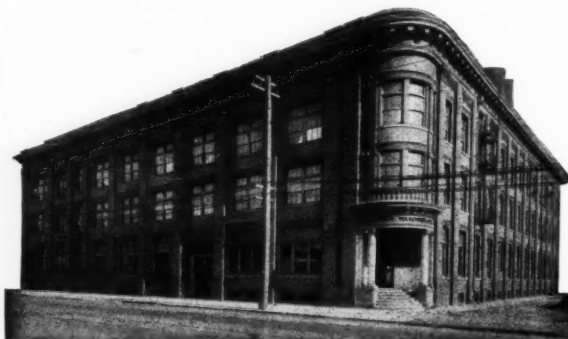
We supply the necessary services for the  
handling of merchandise through a  
modern warehouse.

**San Francisco Warehouse Co.**  
625 Third Street



**SAN FRANCISCO, CAL.**

**SERVICE**



Office and Main Warehouse  
**2701 SIXTEENTH STREET, SAN FRANCISCO, CAL.**  
Cable Address  
"SOUTHER"

Codes  
All Standard  
Private Terminal on So. Pac. Tracks  
Exclusive Facilities for Handling Automobiles, Trucks,  
Tractors, Etc.

In 1925 we handled 76,000 motor vehicles

**SOUTHER WAREHOUSE COMPANY**

**BOXING FOR EXPORT SHIPMENT**

All details handled, bills of lading, clearance, etc.  
We are Specialists in this business

**MAY WE SERVE YOU?**

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NO TASK TOO GREAT  
**LAWRENCE**  
WAREHOUSE COMPANY  
NO DETAIL TOO SMALL



AL T. GIBSON, Pres.  
37 DRUMM STREET, SAN FRANCISCO

**DENVER, COLO.**

A. H. AMICK

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**Amick Transfer & Storage Co.**

1029 Santa Fe Drive, Denver, Colo.

**FIREPROOF WAREHOUSE**

Pool cars distributed.  
Local and interurban truck  
service.  
Low insurance rates.

Household Goods  
Complete packing service.  
Reciprocity at every opportu-  
nity.  
Open or private storage.

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**The Johnson Storage and Moving Company, Inc.**

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**MODERN FIREPROOF WAREHOUSE**

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Member { C. T. & S. A.  
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Household Pool Car Distributors

**DENVER, COLO.**



**WAREHOUSE**

Your Stocks With Us

150,000 Sq. Ft. Space

**DENVER**

Serves Two Million Population

Send Pool Cars in our care for distribution.  
42 teams and trucks insure prompt service  
to customers and satisfaction to you..

**The Kennicott-Patterson Transfer Co.**  
1700 Sixteenth St. DENVER, COLORADO

**DENVER, COLO.**

F. C. Bartle, President

**The Merchants Storage & Transfer Co., Inc**

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**Drayage, Storage and Distribution**

**Sprinkler System Warehouse**

Free Switching from All Railroads

Centrally Located in Shipping District

Storage of Merchandise and Household Goods

Household Goods Shipped to All Points at Reduced Rates

Distribution of Pool Cars Our Specialty

Correspondence Solicited

**GREELEY, COLO.**

**The Union Delivery Company**  
MOVING, STORAGE, PACKING and SHIPPING  
of HOUSEHOLD GOODS

**MERCHANDISE DISTRIBUTION, POOL CAR SHIPMENTS**

R.R. siding U. P. and C. & S.

Members of THE COLORADO TRANSFER & WAREHOUSEMEN'S  
ASSOCIATION

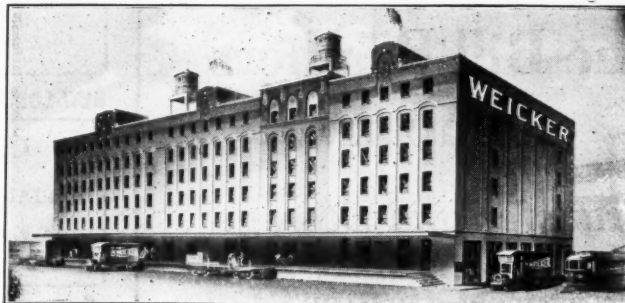
DENVER, COLO.

## When You Need SERVICE in Denver and vicinity

*we are the distribution and  
warehousing specialists who  
can serve you best.*

Our vast experience as receivers, forwarders and distributors has fitted us to handle your every requirement in the most satisfactory way.

Our spacious warehouses located within a short haul of all local freight depots, the wholesale and retail district, and connected by track with every railroad entering Denver, is at your disposal—comprehensive service and full protection at extremely low rates.



We are thoroughly equipped to distribute General Merchandise, Heavy Machinery, Household Goods.

Write our traffic expert for full information on all your shipping problems in this territory. He will be glad to help you—we will be glad to serve you.



### THE WEICKER TRANSFER & STORAGE COMPANY

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## Send Your Goods Where They Will Be Bought!

The residents of Pueblo proper have two million dollars a month to spend. Thirty million a year besides are spent in Pueblo by the residents of the surrounding two hundred mile circle.

Put your goods into our house in Pueblo, where the quickest and cheapest movement to any part of this prompt-paying market is secured.

You could not ask for better service than we will give you. You will find no other region of the country more responsive to cultivation. Put a stock into Pueblo and prosper.

**S A G E**  
Transfer & Storage Co.

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Storage Warehouses

PACKING—CRATING—SHIPPING OF  
HOUSEHOLD GOODS

Members of the National Furniture Warehousemen's Assoc.

HARTFORD, CONN.

Tel. Connection Office: 335 Trumbull St.

Safety Vaults for Silverware

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JOSEPH M. PELCHAT, Proprietor

Local and Long Distance Furniture and Piano Moving  
Packing, Crating and Shipping of Pianos, Furniture, China  
Only Fireproof Storage Warehouse in Hartford

Members { National Furniture Warehousemen's Association  
Connecticut Warehousemen's Association  
Canadian Warehousemen's Association

## How to Advertise

Make your assertion bold and strong;

In form, make good your own invention.

Give margin to your little song,

And thus command the more attention.

"Pop."



## HARTFORD, CONN.

Established 1850

Incorporated 1908

# The Bill Brothers Company

## Transfer and Storage

### 190 Ann Street, Hartford, Conn.

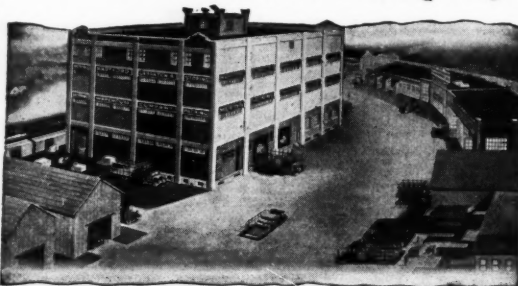
Superior Facilities for the Moving of Machinery, Safes, Furniture, Pianos, Etc. Household Effects of Every Description Properly Packed for Storage or Shipment

### STORAGE WAREHOUSES

With Separate Apartments for Household Goods and Private Railroad Siding for Carload Shipments

## HARTFORD, CONN.

## Hartford Despatch & Warehouse Company



### FIREPROOF WAREHOUSE

THE ONLY FIREPROOF WAREHOUSE in this vicinity for storage of furniture and merchandise with PRIVATE RAILROAD SIDING. We offer the LOWEST INSURANCE RATES in and about HARTFORD, a building especially designed for warehouse purposes with PRIVATE ROOMS for the storage of FURNITURE and PIANOS. Open storage for MERCHANDISE and AUTOMOBILES, SHED and YARD ROOM facilities with WATCHMAN SERVICE, a TRUCKING SYSTEM which combines PROMPT LOCAL DELIVERIES with an OVERNIGHT SERVICE via RAIL and MOTOR TRUCK to all the principal TOWNS and CITIES within a FIFTY MILE radius.

#### MEMBERS OF

National Furniture Warehousemen's Association  
Connecticut Warehousemen's Association  
American Warehousemen's Association  
American Chain of Warehouses  
Conn. Representatives: Big Four Transfer Co.

## NEW HAVEN, CONN.

### THE SMEDLEY COMPANY

New Concrete and Steel Fireproof Warehouses  
OFFICE: 165 BREWERY ST.

General Merchandise, Distribution and Household Goods, Storage and Shipping

Long Distance Hauling and Equipment for all Heavy Duty Moving—Machinery, Etc.

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### GARDNER STORAGE CO.

18 BLACKHALL STREET

PIANO AND FURNITURE PACKER, MOVER  
AND SHIPPER

Safe Mover—Freight and Baggage Transfer—STORAGE

Members: Conn. Warehousemen's Assn.

Nat. Furniture Warehousemen's Assn.

## SO. NORWALK, CONN.

### HERSHFIELD

Motor Transportation Co.

Fireproof Storage Warehouse

Household Goods and General Merchandise—

Pool Car Distribution.

Daily express service between New York City and Norwalk.

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William H. Schaefer & Son, Inc.

New Fireproof Storage Warehouse  
Stamford, Conn.

Storage, Shipping of Fine Household Goods  
Serving Stamford and Northern Westchester County  
Members Connecticut Warehousemen's Association

## WATERBURY, CONN.

## Waterbury Storage Company

John Moriarty, Inc., Prop.

Est. 1877

127 East Main St.

Elevators Fireproof Buildings Cap. 562 Rooms

MEMBERS: N. F. W. A.

Connecticut Warehousemen's Ass'n

## WASHINGTON, D. C.

### JACOBS TRANSFER CO.

STORAGE WAREHOUSES

Office—111 Florida Ave., N. E.

Household Goods—Storage, Packing, Shipping

Merchandise—Storage and Distribution

Pool Car Shipments. Heavy Hauling

References—any bank our city

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Specializing  
in Household  
Transportation  
and  
Fireproof  
Storage  
Packing  
and  
Shipping

Also  
MERCHANDISE  
and  
HEAVY  
HAULING



East Avenue and Leland St.  
Washington, D. C.

WASHINGTON, D. C.

**J. LEO KOLB STORAGE CO.**

(Downey Building)

LARGE AND SMALL STORAGE SPACE  
EXHIBITION ROOM ON FIRST FLOOR

Lowest Rates

Tel. Main 5027

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Correspondence Solicited

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**Modern  
Fireproof  
Building**

LONG  
DISTANCE  
MOVING

PACKING  
STORING  
SHIPPING



**SMITH'S TRANSFER & STORAGE CO., INC.**  
1313 You Street, N. W.

WASHINGTON, D. C.

**Union Storage and Transfer Co.**

820 TWENTIETH ST., N. W.

LOCAL AND LONG DISTANCE HAULING  
PACKING—STORING—SHIPPING

Consignments of Pianos and Household Goods to Our Care Will  
Receive Prompt Attention.

WASHINGTON, D. C.

**UNITED STATES STORAGE CO.**

418-420 TENTH STREET, N. W.



Distributors of Pool Cars

**MEMBERS:**

National Furniture  
Warehousemen's Association

Efficient and Courteous  
Service

Modern Fireproof Warehouse

We are prompt in all things.

Member:  
American Warehousemen's Assn.

JACKSONVILLE, FLA.

**Delcher Bros. Storage Co.**

459-61-63-65 Riverside Avenue

**FIREPROOF WAREHOUSE**

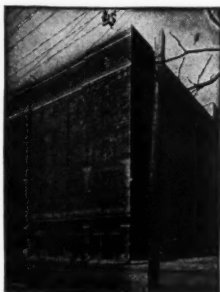
Low Insurance Rate

We Move, Pack, Store and Ship  
Household Goods

Distributing Pool-Car a  
Specialty

FLORIDA'S LARGEST

Shippers of Automobiles  
for Tourists



Member National Furniture  
Warehousemen's Association

JACKSONVILLE, FLA.

**UNION TERMINAL  
WAREHOUSE COMPANY**

EAST UNION and IONIA STREETS

55 Rental Compartments Track Capacity 52 Cars

Building of reinforced concrete with sprinkler system. Low  
Insurance Rate. Sub-Post Office and branch Western Union  
Telegraph. Joint Railroad Agent. L.C.L. freight loaded  
direct for line of road.

**GENERAL MERCHANDISE STORAGE  
AND FORWARDING**

Special attention to handling of pool cars.

MIAMI, FLA.

**The John E. Withers Transfer &  
Storage Co., Inc.**

will give your shipments careful attention. Fireproof Ware-  
house. Facilities for distribution of pool cars. Moving, pack-  
ing, shipping and storing Household Goods and Automobiles.

Private Trackage

Motor Equipment

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ORLANDO, FLORIDA

**Orlando Bonded Warehouse (Inc.)**

Cor. Jefferson and Railroad  
100-112 West Amelia Avenue

Storage and Distributing of General Merchandise,  
Household Goods

Private Siding. A.C.L.R.R.  
Member National Furniture Warehousemen's Association  
Sprinkler Protection Low Insurance  
It's a pleasure to serve you

PENSACOLA, FLA.

**Ferriss Warehouse & Storage Co.**

HARRY P. FERRISS, PRES.

Receiving and Warehousing of General Merchandise in car-  
loads or less than carloads.  
Merchandise stocks carried and records kept for out-of-town  
concerns.

Cor. Chase & Alcinez Streets

TAMPA, FLA.

**UNION  
TRANSFER & STORAGE CO.**

**FIREPROOF WAREHOUSE**

The Men Who Distribute

**Crossman Seeds**

Read DISTRIBUTION & WAREHOUSING  
and consult the Shippers' Index

TAMPA, FLA.

**HOME OF LEE TERMINAL DISTRIBUTION SERVICE***Complete**Dependable**Economical*

REINFORCED CONCRETE WAREHOUSE.  
FLORIDA TERMINAL OF BULL STEAMSHIP LINE  
WEEKLY SAILINGS FROM BALTIMORE

PRIVATE SIDINGS ACCESSIBLE TO ALL RAILROADS  
CONSOLIDATED TRUCK LINE FREIGHT STATION  
DAILY DELIVERIES TO OUTLYING TOWNS



**LEE TERMINAL & WAREHOUSE CORPORATION AT TAMPA**  
*The Economical Distributing Center for West Coast of Florida*

ATLANTA, GA.

WE SAVE YOU MONEY ON CARLOAD LOTS

**FIREPROOF STORAGE**

LOWEST INSURANCE IN ATLANTA—HOUSEHOLD GOODS EXCLUSIVELY



CANDLER WAREHOUSE TRackage ON C. OF GA. and SOU. R. R.

--

ESTABLISHED 1910



ATLANTA, GA.

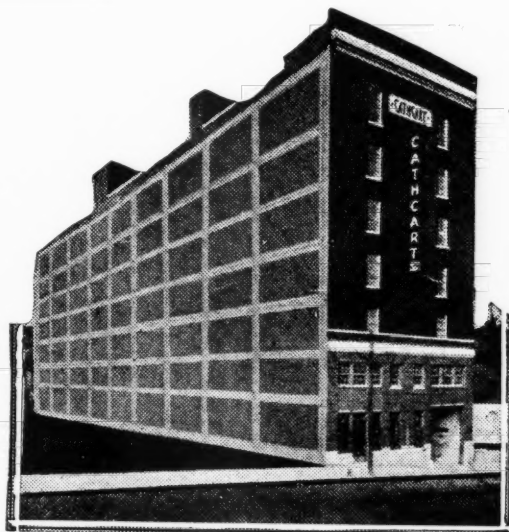
**CAMP-DANIEL TRANSFER & STORAGE, Inc.**

16 Central Ave.

Storage, Packing, Shipping of Household Goods  
Pool Car Distribution of Merchandise

Members of N. F. W. A.

ATLANTA, GA.



**CATHCART VAN AND STORAGE CO.**

HOUSEHOLD GOODS EXCLUSIVELY

THE MOST **MODERN WAREHOUSE** IN THE SOUTH

MEMBERS N. F. W. A.

ATLANTA, GA.

W. G. SPEIR, Pres.

EST. 1917

**Fulton Transfer & Storage Co.**

MERCHANDISE STORAGE—TRANSFERRING  
MFRS.' DISTRIBUTORS—POOL CAR DISTRIBUTION

3 Railroad Sidings

Sprinkler System

18 SO. BUTLER ST.

ATLANTA, GA.

**NATIONAL BONDED WAREHOUSE**

Capital \$150,000.00

Storage, Transfer and Distribution

ATLANTA'S LARGEST WAREHOUSE

GENERAL MERCHANDISE

HOUSEHOLD GOODS

Private railroad siding connecting all railroads—warehouses sprinklered  
and A. D. T. service—local and long distance trucking

Members N. F. W. A. and A. W. A.

ATLANTA, GA.

**Vittur Transfer and Storage Co.**

Moves, Stores, Packs Household Goods

Largest Vans in Atlanta

Office: 330-336 Edgewood Ave. Phone: WA1. 2581

ATLANTA, GA.



**Storage and Distribution  
Merchandise Only**

Specializing in Pool Car Distribution

Member American Warehousemen's Association

**Security Warehouse Co.**

Atlanta, Ga.

AUGUSTA, GA.

**THE HOLLINGSWORTH WAREHOUSES**  
MERCHANDISE WAREHOUSING AND  
DISTRIBUTING POOL CARS A SPECIALTY

Warehouse Not as Large as the Largest.  
But Our Service as Good as the Best.

**Advertising**

Some people may not think it wise  
(Thank Goodness they are few)  
To show a healthy enterprise  
In doing what they do.

That those who represent Success  
Owe much to Advertising  
"Is immaterial"—more or less—  
"Not worth the recognizing"

If not too old to take advice,  
All ye who wish to rise,  
Lay by your surplus—pay the price—  
And straightway Advertise.

—POP.

MACON, GA.

J. N. WHITE, Mgr.

**WASHBURN WAREHOUSE CO.**  
MERCHANDISE HOUSEHOLD GOODS  
POOL CAR DISTRIBUTION  
SERVING ALL OF GEORGIA

Private Siding  
C of Ga.

201 POPLAR ST.

SAVANNAH, GA.

**Savannah Bonded  
Warehouse and Transfer Co.**

General Storage—Re-Consigning  
Distributing—Forwarding  
Prompt and Efficient Service  
Exceptional Facilities  
Custom House Brokers

Track Connections with all Railroads and Steamship Docks  
Members American Chain of Warehouses  
Members American Warehousemen's Association

**R. B. YOUNG, President**  
Bay Street Extension and Canal  
P. O. Box 985 Savannah, Ga.

HONOLULU, HAWAII

When Shipping Goods to  
**HONOLULU**

consign to us and the same will be given our best  
attention. Modern Concrete Warehouses. Col-  
lections promptly remitted. Correspondence  
solicited.

**CITY TRANSFER COMPANY**

Cable Address:  
LOVERINO, HONOLULU

BOISE, IDAHO

**PEASLEY**  
TRANSFER & STORAGE COMPANY  
STORAGE, TRANSFER AND FORWARDING  
419 SO. EIGHTH STREET

BLOOMINGTON, ILL.

F. G. BRUNTON

C. E. BRUNTON

R. N. BRUNTON

**BRUNTON**  
**TRANSFER & STORAGE CO.**

Since 1905

Pool Cars and Merchandise Distributors  
Household Goods stored; packing and  
crating; long distance moving a specialty.  
Local distributors for Procter & Gamble, H. J.  
Heinz Co., etc. Consign your goods in our care  
for prompt delivery.

415 N. Center St.

Phone 813

CAIRO, ILL.

**Glynn's**

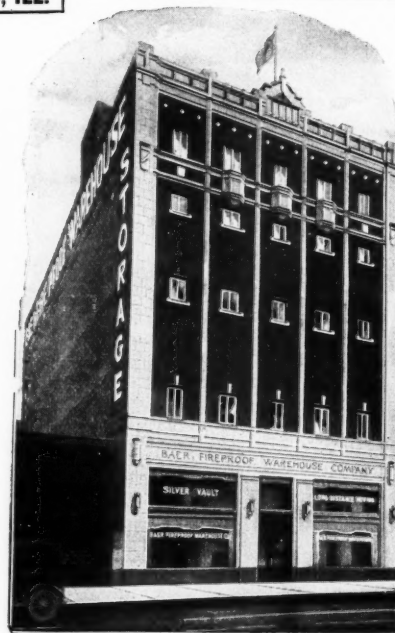
**Transfer and Fireproof Storage Warehouse**

MOVING—PACKING—SHIPPING—STORING  
DISTRIBUTING POOL CARS

Private Siding—Trucking Service—Member N.F.W.A.

The Only Storage Firm in the City Who Own Their  
Fireproof Building

CHICAGO, ILL.



Established 1892

**BAER FIREPROOF WAREHOUSE CO.**  
POOL CAR DISTRIBUTORS  
Of Furniture and Planos

Collections Promptly Remitted  
Members—The Chicago Association of Commerce—Nat'l Furniture Ware-  
housemen's Assoc.—Illinois F. W. Association—Furniture  
and Piano Movers Assoc.  
General Office—1927 Milwaukee Avenue, Chicago, Illinois

CHICAGO, ILL.

**BEKINS**

Household Shipping  
Company



Reduced Rates on Household Goods, Automobiles  
and Machinery

General Offices, 905 BEDFORD BLDG., Chicago  
NEW YORK, BOSTON, BUFFALO, CINCINNATI

The Men Who Distribute

**Murphy Chairs**

Read DISTRIBUTION & WAREHOUSING  
and consult the Shippers' Index

CHICAGO, ILL.

**CENTRAL  
STORAGE & FORWARDING CO.**

2001 West Pershing Road

Operating  
CHICAGO'S FINEST MERCHANDISE WAREHOUSES

On the great Chicago Junction Railway—In the world-famous Central Manufacturing District—The geographical center of Chicago.

No Switching Charges—No Cartage—No Delays.  
650,000 square feet of fireproof space. Insurance rate  $7\frac{1}{2}\%$

No Train-Cars Here  
L. C. L. Freight Loaded Direct to Destination  
WHY NOT USE THE BEST FACILITIES?

CHICAGO, ILL.

**Are You a Judge of Warehouses?  
Come and Look at a Good One**

See for yourself our location with reference to Chicago's central business district. Walk through our low-insurance-rate buildings. Watch our men and equipment expediting goods. See our tunnel connection with all outbound railroads. Read our financial statement.

We are confident that you will decide to consign future carloads to

**Currier-Lee Warehouse Co.**

427 W. Erie Street Chicago, Illinois  
Associated with Distribution Service, Inc.  
Offices in New York, Chicago and San Francisco

CHICAGO, ILL.

ESTABLISHED 1892

**EMPIRE  
WAREHOUSES, INC.**

**FIREPROOF WAREHOUSES**

**8**

For

Household Goods

**8**

**POOL CAR DISTRIBUTION**

**In the Heart of North and South Sides**

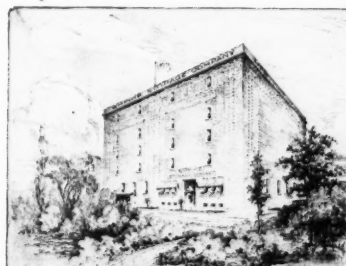
Private Sidings on Chicago Junction and Illinois Central

**For Efficient Service**

**Ship the EMPIRE Way**

**Warehouses**

40th St. and Calumet Ave.  
4717-16 Cottage Grove Ave.  
5041-45 Lake Park Ave.  
5147-53 Cottage Grove Ave.  
1117-19 East 62nd St.  
6154-56 Wentworth Ave.  
6824-26 Stony Island Ave.  
4015-17 Broadway



**General Offices: 52nd St. and Cottage Grove Ave.**

Member A-W-A, N-F-W-Assn., I-F-W-A

CHICAGO, ILL.

**Globe Express and Van Co.**

**AUTOMOBILE STORAGE**

4350-56 OGDEN AVE., CHICAGO

Cartage Contractors

Furniture and Piano Movers

CHICAGO, ILL.

**Branch Office Service**

Desk space completely equipped with fireproof storage space and motor truck service available when wanted for manufacturers or manufacturers agents.

Particularly well located for the automobile or printing trade.

**GOOLD STORAGE COMPANY**

Est. 1875

2219-21 Cottage Grove Ave.  
CHICAGO

CHICAGO, ILL.

**GRISWOLD & WALKER, Inc.**

OPERATING G. & W. TERMINAL and  
SIBLEY WAREHOUSES

ROY C. GRISWOLD, Pres.

WELLINGTON WALKER, Vice-Pres.

S. H. VERRAL, Treas.

H. H. SMITH, Secy.

Capital \$300,000.00

**Executive Offices: 1525 Newberry Ave.  
CHICAGO**

This consolidation creates the most Complete Warehousing Organization in Chicago and the Middle West.

MERCHANDISE STORAGE AND DISTRIBUTION  
U. S. CUSTOMS AND INTERNAL REVENUE BOND

Motor Truck Delivery. Parcel Post Distribution. Trap Car  
Reshipping. Field Warehousing. Pool Car Distribution.

It's the 'ammer, 'ammer, 'ammer on the 'ard  
'igh road

That tells upon the 'osses 'oofs and not the  
'evvy load;

And it's just the 'ammer, 'ammer on the  
ADVERTISER'S NAME

That takes him from OBSCURITY and lands  
him safe in FAME.

"Pop."



CHICAGO, ILL.

**HARDER'S**  
Fireproof Storage and Van Company  
now operated by  
**EMPIRE WAREHOUSES, INC.**  
General Office—52nd and Cottage Grove Ave.  
N-F-W-A I-F-W-A A-W-A

CHICAGO, ILL.

## EMPIRE Merchandise Warehouse

(Formerly operated by Harder's Fireproof  
Storage and Van Company)

These factors assure efficient service  
On Chicago Junction Ry.  
Inside House Track for Five Cars  
Trap Cars Daily.

Large Motor Truck Fleet for City Delivery

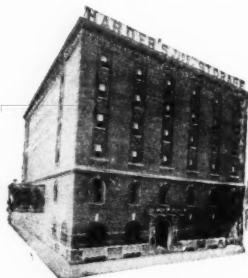
Ship the  
EMPIRE WAY

Extensive Storage

Facilities

Efficient

Organization



**EMPIRE WAREHOUSES, INC.**  
General Office:  
52nd St. and Cottage Grove Ave.

Ye can't make any progress just by stayin'  
where ye are;

Ye can't make speed by settin' in a one  
horse car.

Don't think because yer Movin' that yer surely  
"gettin'" there;

Unless ye get PUBLICITY—ye can't get  
Anywhere!

"Pop."

CHICAGO, ILL.

ESTABLISHED 1874

# HEBARD

**Storage  
Warehouses**



All collections on ship-  
ments made to us promptly  
remitted.

Member of  
National Furniture  
Warehousemen's Asso-  
ciation, Illinois, New  
York and  
Southern  
Warehouse-  
men's Asso-  
ciation.

Our Seventh Warehouse  
on 6331-33 Broadway, near Devon Avenue, which will handle all  
Rogers Park or North Shore shipments.  
Warehouses A-B-C-D, West Side, Ogden and Winchester Aves.  
Warehouses E-F, North Side, Sheridan Road and Sheffield Ave.  
Warehouse G, North Side, Broadway near Devon Ave.

CHICAGO, ILL.

Englewood Office  
5711 So. Halsted St.  
Englewood 0700

Woodlawn Office  
6150 Cottage Grove Ave.  
Fairfax 7000

## JOYCE BROTHERS CO.

Moving and Storage

Expert Packing and Crating  
Long Distance Hauling

Rogers Park Office  
6428 No. Clark St.  
Rogers Park 0033

Downtown Office  
31 No. State Street  
Phone Central 5800

CHICAGO, ILL.

## General Merchandise Storage

Low insurance rates—Free Switching by all roads. Superior trucking  
and delivery service by our Hundred Trucks.

**EDWARD LASHAM CO.**  
1555 South State Street Chicago

The Men Who Distribute

**Quality Brands**

Read DISTRIBUTION & WAREHOUSING  
and consult the Shippers' Index

CHICAGO, ILL.



**MIDLAND WAREHOUSE & TRANSFER CO.**  
MERCHANDISE STORAGE and DISTRIBUTING  
15th St. and Western Ave.  
Chicago, Ill.

WAREHOUSES  
NO. 1 43rd AND ROBEY STS.  
NO. 2 15th PL. AND WESTERN AVE.  
NO. 3 15th ST. AND WESTERN AVE.

No Cartage  
or Trap Car  
Delays  
in Making  
L. C. L.  
Shipments.

CHICAGO, ILL.

**Soo Terminal Warehouse**  
519 W. Roosevelt Road Chicago, Illinois

*Merchandise Storage and Distribution  
Pool Cars Efficiently Handled*

We will deliver via the Chicago tunnel to any trunk line, freight house floor, excepting the Pierre Marquette Railroad, your shipments destined for points beyond Chicago; also we will make shipments for you over the Aurora & Elgin electric line and its connections, which gives over-night service. All without cartage charges.

**"THE ECONOMICAL WAY"**

CHICAGO, ILL.

**North Pier Terminal Company**  
589 East Illinois St. Telephone Superior 5606



**Largest Terminal Warehouse in Chicago.**  
16,000,000 cu. ft. Genl. Stg. and Leasing On North Pier Slip.  
Operated by National Terminals Corporation.  
(See our advertisement on front inside cover page.)

CHICAGO, ILL.

**Chicago  
Jos. Stockton Transfer Co.**

1020 South Canal St., near Taylor St.

**Teaming of Every Description—City Delivery Service and Carload Distributors**

CHICAGO, ILL.

**Ontario Warehouse Company**  
MERCHANDISE STORAGE  
Ontario and Kingsbury Street, Chicago, Ill., U. S. A.  
Private track facilities, with free switching from all railroads entering Chicago

CHICAGO, ILL.

**Railway Terminal & Warehouse Company**  
444 W. Grand Ave.

**Merchandise Storage**

Located in the heart of the wholesale district. Especially convenient for the warehousing of spot stocks for distribution among the wholesale grocers.

Side track facilities with free switching from all railroads entering Chicago.

**Modern Building—Low Insurance Rates  
Use Our Service**  
Tunnel Service—Cut your cartage in half

CHICAGO, ILL.

**CHICAGO'S  
BIG DOWNTOWN WAREHOUSE**



**"At the Edge of the Loop"**  
Stocks Carried for Out-of-Town Manufacturers; Storage-in-Transit Privileges; Prompt Rail Shipments Anywhere Without Cartage Expense; Pool Cars Distributed; Office and Warehouse Space To Lease.

For Modern Warehousing Service as Adapted to Your Individual Distributing Requirements in the Midwest Market. Consult

**WESTERN WAREHOUSING COMPANY**  
320 W. POLK ST., CHICAGO E. H. Hagel, Supt.

DANVILLE, ILL.

**Beeler Transfer & Storage**

Merchandise Pool Car Distribution. Furniture Storing, Packing & Shipping. Auto Truck Service. Long Distance Hauling. City and Inter-urban Delivery.

**208-210 West Main St.**

The Men Who Distribute

**Indian Packing Products**

Read DISTRIBUTION & WAREHOUSING and consult the Shippers' Index

## DANVILLE, ILL.

**Danville Transfer & Storage Co.**

C. B. Hall, Pres.

G. W. Orr, Secy. &amp; Treas.

The only fireproof warehouse in Danville. Storage for household goods and **Merchandise Distributing**. Conveniently located in the heart of the wholesale district. Private siding to warehouse, and free switching from all railroads.

**Low Insurance Rate**

Danville is the breaking point of Eastern and Western Classification of freight rates, making a most convenient point for the distributing or storage of carloads.

American Warehouse Association.  
Members National Furniture Warehousemen's Association.  
Members Illinois Furniture Warehousemen's Association.

## DECATUR, ILL.

**Ship to Meridith for Prompt Service in Decatur and Environs**

Distributors of Household Goods and Merchandise. Located within 3 blocks of all freight depots. No terminal delay or switch charge when consigned direct to Meridith.

Household Goods and Merchandise Storage. Private Locked Rooms. Steam Heated Piano Rooms. Vans—Trucks—Drays. Ship your next car for results to

**F. M. MERIDITH**

Storage and Transfer Co.

320-350 E. Cerro Gordo

Decatur, Ill.

## DECATUR, ILL.

Since 1892

**HAMMAN BROS.  
Transfer & Storage Co.**

Decatur's pool car distributors. Spot stock deliveries. Merchandise and Household Goods Storage. Private siding and free switching to the **ONLY FIREPROOF WAREHOUSE** in the City. Truck and Team service.

Office:—WILLIAM ST. at BROADWAY.

## ELGIN, ILL.

**Elgin Storage & Transfer Co.**

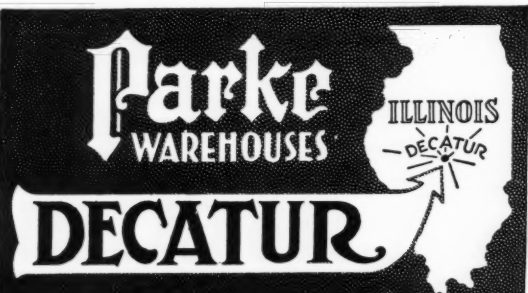
A. C. MUNTZ, Pres.

H. C. MUNTZ, Mgr.

Merchandise and Furniture Storage, Long Distance Hauling. Bonded Warehouse. Storing, Packing, Shipping.

Warehouse and Office: No. 60-62 North Grove Ave.

## DECATUR, ILL.



Before you decide on your Illinois distribution investigate our facilities, service and low rates to Illinois points—

**PARKE WAREHOUSES**

Decatur, Illinois

**STORAGE AND DISTRIBUTION**

## EVANSTON, ILL.

**Evanston Transfer Co.**

**MOVING - PACKING - SHIPPING**  
**LONG DISTANCE REMOVALS**

Phone University 5112

716 MAIN STREET

## JOLIET, ILL.

Telephones 501 and 502

**Joliet Warehouse and Transfer Company**  
Joliet, Illinois**MERCHANDISE STORAGE AND DISTRIBUTION**

Best distributing point in Middle West.

Located on five Trunk Lines and Outer Belt which connects with every road entering Chicago.

No switching charges.  
Chicago freight rates apply.

## MOLINE, ILL.

**Fireproof Warehouse**

**Freight Distributors for Moline, Rock Island, East Moline and Silvis, Ill., Davenport, Iowa and Upper Mississippi Valley**

Send your freight to us at Moline for distribution as we are in the center of the group of cities here and the haul will be shorter. We have our own private track at the warehouse and our own team track. Forwarding and reconsigning.

**Crandall Transfer & Warehouse Company**

1205-1209 Fourth Ave.

Moline, Illinois

The Men Who Distribute

**Moline Plows**

Read **DISTRIBUTION & WAREHOUSING**  
and consult the Shippers' Index

The Men Who Distribute

**Indian Motorcycles**

Read **DISTRIBUTION & WAREHOUSING**  
and consult the Shippers' Index



PARIS, ILL.

30 Years of Constant Trying for a Better Service Has Made Ours  
the Best

**REED TRANSFER & STORAGE**

STORAGE WAREHOUSE.  
HOUSEHOLD FURNITURE AND PIANOS.  
PACKING, CRATING AND SHIPPING.

315 N. Main Street Telephone 132 PARIS, ILLINOIS

PEORIA, ILL.

Office: 4-1285, 4-4238

TELEPHONES

Barns: 4-3307

**O'Neill Bros. Transfer & Storage Co.**

*Merchandise Hauling*

Carload Shipments Distributed

Freight Handled Promptly

Pool Car Distributing

Merchandise and Furniture Storage

**Commercial Furniture Warehousing**

617-619-621 S. Water St.

Peoria, Ill.

ROCK ISLAND, ILL.

**Rock Island Transfer & Storage Co.**

Merchandise Warehousing and Distribution

Motor Truck Service

C. B. & Q. SIDING

FREE SWITCHING FROM ALL OTHER ROADS

ROCKFORD, ILL.

**Carry Spot Stocks  
at Rockford—and at  
The Bartlett Warehouse**

Rockford (pop. 85,000) is a prosperous and rapidly growing industrial city, the largest city and chief distributing point in a wide territory. Steam and electric lines and concrete highways lead to all important towns in Northern Illinois and Southern Wisconsin.

The Bartlett Warehouse is new, of fire-proof construction, and centrally located. The downtown district and all freight stations are within four blocks.

**Bartlett Storage Warehouse**

Rockford, Illinois

ROCKFORD, ILL.



*"The Choice of the Greatest Industries"*

SPRINGFIELD, ILL.

**HILLIER STORAGE COMPANY**

Fireproof Warehouses

Merchandise and Pool Car Distribution—Spot Stock Delivery—Motor and Team Service.

Household Goods Storage—Moving, Packing and Shipping.

Private Siding C. & A. Free Switching from all Railroads when Billed in Our Care.

Office: 413 N. 4th St.

Springfield, Ill.

SPRINGFIELD, ILL.

**Merchants Transfer & Storage Co.**

BONDED WAREHOUSE

Storage, Packing, Moving and Shipping, Private Siding

Wabash R. R., Free Switching from all railroads.

Merchandise and Pool Cars a specialty.

Long Distance and Heavy Hauling.

1000 East Monroe Street, Springfield, Illinois

FORT WAYNE, IND.

AUG. C. BORGMANN

CLIFF H. BORGMANN

**A. C. BORGMANN & SON**

TRUCKING, MOVING AND GEN. TRANSFER

STORAGE, PACKING AND CRATING

DISTRIBUTING

Office, 1618 S. Harrison

Stables, 333-335 S. Clinton

FORT WAYNE, IND.

**Fort Wayne Storage Company**

FORT WAYNE, INDIANA

*General Merchandise  
Storage and Forwarding*

FORT WAYNE, IND.

**PETTIT'S STORAGE WAREHOUSE CO.**

"Fireproof" Buildings

STORAGE, TRANSFER, DISTRIBUTION

Located in Center of Business District

We have our own truck line and are equipped to make prompt deliveries  
Private siding

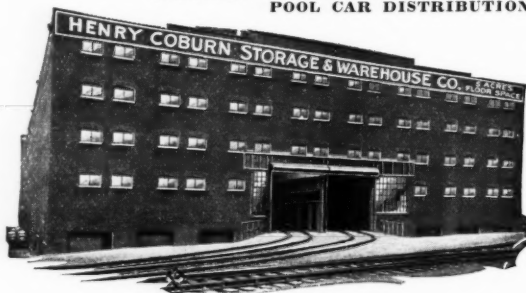
The Men Who Distribute

**U. S. Envelopes**

Read DISTRIBUTION & WAREHOUSING  
and consult the Shippers' Index

## INDIANAPOLIS, IND.

*"Coburn Service for Efficiency"*  
MERCHANDISE STORAGE  
POOL CAR DISTRIBUTION



Orders enroute same day received. No trap car delays.  
Operating our own truck equipment.

## INDIANAPOLIS, IND.

D. & D. TRANSFER & STORAGE CO.  
Indiana Licensed Class A Warehouse  
221-25 W. South Street.

Modern, Concrete, Vacuum Sprinkled, Steam Heated Building for the  
Storage and Distribution of Merchandise.  
Private R. R. Siding—Free Switching.  
Over 21 Years Continuously Serving  
Local and National Firms

## INDIANAPOLIS, IND.

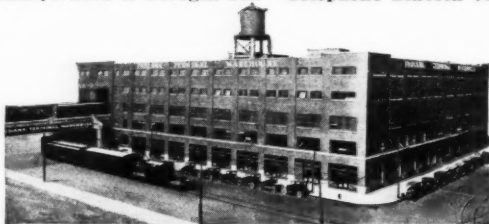
Indiana Refrigerating Company  
240 So. Pennsylvania St. Telephone Main 0403



Largest Cold Storage Plant in Indiana.  
2,250,000 cu. ft. Cold Storage. 125 Tons Ice Daily.  
Operated by National Terminals Corporation.  
(See our advertisement on front inside cover page.)

## INDIANAPOLIS, IND.

Indiana Terminal Warehouse Company  
Pennsylvania & Georgia Sts. Telephone Lincoln 7511



Free Traction Trap Car Service Saves Cartage and Delay.  
3,000,000 cu. ft. Genl. Stg. Two Blocks from Center of City.  
Operated by National Terminals Corporation.  
(See our advertisement on front inside cover page.)

The Men Who Distribute  
**United Drug Products**  
Read DISTRIBUTION & WAREHOUSING  
and consult the Shippers' Index

## INDIANAPOLIS, IND.

**Shank Fireproof Storage Co.**

Indianapolis, Ind.

We have added a new Fireproof Warehouse for Household Goods, 60,000 sq. ft. of floor space, at 1430 N. Illinois St. This new building is in addition to our other storage house at 227-229 North Jersey St. Every facility for the prompt and efficient handling of your shipments.

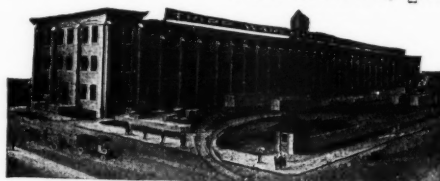
PACKING  
STORAGE

MOVING  
FORWARDING

Members of N. F. W. A.

## INDIANAPOLIS, IND.

INDIANAPOLIS, IND.



Tripp Warehouse Company  
MERCHANDISE STORAGE—POOL CAR DISTRIBUTION  
Centrally Located in Shipping District  
Motor Truck Delivery No Trap Car Delays  
"Service That Satisfies"

## LAFAYETTE, IND.

**C. R. Whistler Transfer & Storage Co.**

Fireproof Storage  
Cor. First and Columbia Street Lafayette, Ind.

Heavy Haulage our specialty.  
General distribution and storage of merchandise.  
Motor van for local and distance moving.  
Storage for household goods and machinery.  
Packing and shipping.  
Private siding: CCC & St. L. and Nickel Plate Lines.

## MARION, IND.

**VIRGIL F. LEMON**

FIREPROOF STORAGE and WAREHOUSE

Local and Long Distance Moving  
Office, 314 S. Branson St. Marion, Indiana  
Furniture Packing, Storing and Shipping

## MUNCIE, IND.

H. L. OLIVER, President  
D. O. HENDERSON,  
Sec. and Treas.

Iron Safes, Machinery, Household Goods and Pianos Moved

All Kinds of Merchandise Stored and Distributed

TELEPHONE 141-142

DELAWARE TRUCKING CO., INC. Muncie, Ind.

Carload Shipments Distributed  
Pool Car Distributing Long Distance Hauling  
Motor Service Private Siding to Warehouse  
Free Switching from All Railroads



**SOUTH BEND, IND.**

**WARNER WAREHOUSE CO.**

**Merchandise Storage and Distribution**

New York Central Siding—Free Switching—Pool Car Distribution—Negotiable Warehouse Receipts Issued.

Member: American Warehousemen's Assn.

**CEDAR RAPIDS, IOWA**

**Cedar Rapids Transfer & Storage Co., Inc.**

Fireproof Warehouse Motor Truck Service

Distributing and Warehousing All Classes of Merchandise, Household Goods and Automobiles

290,000 Square Feet Storage Space

**TERRE HAUTE, IND.**

**Bauermeister Terminal Company**

Private R.R. Track—Capacity 21 Cars connecting with all Lines

Merchandise Storage and Distribution a Specialty  
Pool Cars Solicited

Motor Trucks for Store Door Delivery. Our clients do the selling—  
We do the rest. Members American Chain of Warehouses.

**BURLINGTON, IOWA**

Solicits your shipping  
on the basis of

**SERVICE**

**PROMPTNESS**

**EFFICIENT HANDLING**

**EXCELLENT FACILITIES FOR  
DISTRIBUTION IN EVERY PHASE**

Transit Privilege on Sugar, Potatoes, Lumber & Beet Pulp  
Low Insurance Rate

Pool Cars Storage Distribution

**MERCER TRANSFER & STORAGE CO.**  
Burlington, Ia.

**MERCER  
ON THE  
MISSISSIPPI**

**DAVENPORT, IOWA**

Where the  
West Begins

Reliable for  
20 Years  
Saving-freight  
The  
Mississippi  
Rate Break



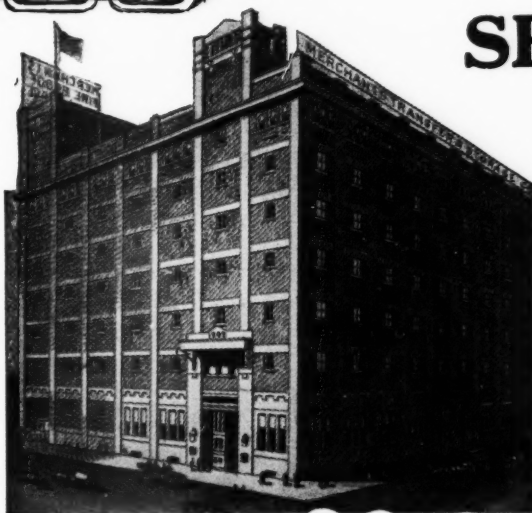
Fireproof Warehouse, on Trackage—In the Business and Shipping District of Davenport.  
Reference—93 Nationally Known Firms Using Our Distributing and Warehouse Service.  
Ewert & Richter Express and Storage Co., Davenport, Iowa

The Men Who Distribute

**Tropical Paint**

Read **DISTRIBUTION & WAREHOUSING**  
and consult the Shippers' Index

**DES MOINES, IOWA**



Member:  
American Chain of Ware-  
houses, Incorporated

Eastern Representative:  
260 W. Broadway,  
New York City

Western Representative:  
203 So. Dearborn Street  
Chicago

**SERVICE  
FOR THE SHIPPER**

Our service and equipment enables us  
to handle your shipments to the best ad-  
vantage.

Warehouse located within a short haul  
of local depots and wholesale and retail  
districts.

Storage for all commodities.

Pool car distribution.

Write for rates and information.

Place spot stocks with us and give your  
customer quick service.

200 Package Cars leave Des Moines daily,  
furnishing 24-hour service to surrounding  
territory.

**MERCHANTS  
TRANSFER & STORAGE CO.**

Ninth and Mulberry Streets, Des Moines, Iowa  
Members: AWA, NFWA.



## DES MOINES, IOWA

YOU REACH ALL OF IOWA  
THROUGH DES MOINES

Let us send you a map showing how easy it is to cover the State from Des Moines.  
Write us for any information you may need for distribution in IOWA.

## BLUE LINE STORAGE COMPANY



Represented by Distribution Service, Inc.  
100 Broad St. 427 Erie St. 625 Third St.  
New York City Chicago San Francisco  
Phone Phone Sup-7180 Phone  
GG-8100 Satty-3461

## MARSHALLTOWN, IOWA

## Marshalltown Fire Proof Storage Co.

Fire Proof Warehouse Motor Truck Service

Distributing and Warehousing all classes of merchandise, household goods and automobiles. Excellent railroad connections for pool cars and spot stocks.

## OTTUMWA, IOWA

## DAGGETT

## TRANSFER AND STORAGE

Special Attention Given to Merchandise  
Distribution and Pool Car Shipments

MEMBERS:  
Central Warehousemen's Club  
National Furniture Warehousemen's Association

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Sixth and Perry Sts., Sioux City, Iowa

**BEKINS**  
VAN & STORAGE CO.

MOVING SHIPPING PACKING STORING

Omaha, Nebr.  
Seattle, Wash.  
Tacoma, Wash.  
Portland, Ore.  
Vancouver, B. C.  
Los Angeles, Cal.  
San Francisco, Cal.  
Oakland, Cal.  
Fresno, Cal.  
Hollywood, Cal.  
Sacramento, Cal.

## SIOUX CITY, IOWA.

Berthelsen Transfer and  
Storage Company

Household Goods packed, stored and shipped.

Local and long distance hauling.

Distributors of Pool Cars.

Private Siding.

Household Goods and Merchandise Warehouse.

1509-11-13-15 East Fourth St.  
Sioux City, Iowa

Member of Montul Whse. Service, Inc.

## SIOUX CITY, IOWA

Pianos, Safes and Heavy Hauling  
If It's Routed to or Through Sioux City, Bill It to

**ROSENTHAL**

Fireproof and Steam Heated Storage

300 Iowa Street, Sioux City, Iowa

## WATERLOO, IOWA

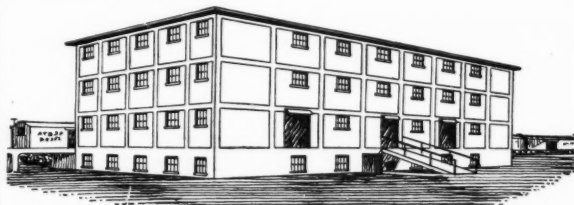
## IOWA WAREHOUSE CO.

Fireproof Warehouse

Motor Truck Service

Distributing and Warehousing All Classes of  
Merchandise, Household Goods and Automobiles

## HUTCHINSON, KANSAS

HUTCHINSON'S  
Only Fireproof Warehouse

Doing a General Warehouse Business  
Storing New Merchandise Only

Private Siding A. T. & S. F.

R.R. Free Switching from

A. V. I., C. R. I. & P. & Mo.

Pac. R.R.'s.

Motor Truck Equipment for

L. C. L. Shipments.

## Hutchinson Bonded Warehouse

Cor. Cleveland and Second Sts.

Hutchinson

Kansas

OWNER—A. G. Barnett—MANAGER

## KANSAS CITY, KANSAS

## Inter-State Transfer and Storage Company

## FIREPROOF WAREHOUSE

Packing, Moving, Storing and Shipping

738-740 Armstrong

L. J. CANFIELD, Proprietor

Telephone Drexel 3420

## PITTSBURG, KANSAS

Best Location for KANSAS, MISSOURI, and OKLAHOMA  
MERCHANDISE STORAGE and POOL  
CAR Distribution

Located on the Atchison, Topeka & Santa Fe, Joplin-Pittsburg, Kansas City Southern, Missouri Pacific, and St. Louis & San Francisco Railways.

PITTSBURG TRANSFER & STORAGE CO., Inc.  
P. O. Box 527

The Men Who Distribute

## Dr. Miles Medicines

Read DISTRIBUTION & WAREHOUSING  
and consult the Shippers' Index

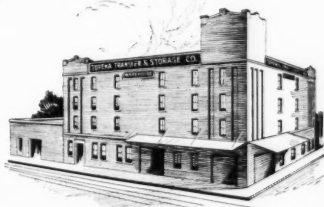
TOPEKA, KANSAS.

O. H. White, Pres. N. F. W. A. A. W. A.  
E. F. Dean, Sec. W. F. Atoll, Treas.

**THE TOPEKA  
Transfer &  
Storage Co.,  
Inc.**

Established 1880

**Three Houses for  
Merchandise and  
Household Goods**



Private switch connections with the A. T. & S. F., C. R. I. & P., U. P., and M. P. Free switching. Motor service. Prompt remittance of advanced charges and collections. POOL CAR DISTRIBUTION, accurately and promptly. 75,000 sq. ft. Investment \$200,000. We solicit your shipments.

WICHITA, KANSAS

**FIREPROOF WAREHOUSE**

CRATING - STORING - PACKING - MOVING - SHIPPING  
of HOUSEHOLD GOODS and GENERAL MERCHANDISE  
POOL CARS DISTRIBUTED — FREE SWITCHING  
SANTE FE, ROCK ISLAND, FRISCO, MO. PAC., K.C.M.&O.  
and MIDLAND VALLEY RAILROADS  
LOCAL AND LONG DISTANCE HAULING

**SOUTHWESTERN TRANSFER & STORAGE CO.**



WICHITA, KANSAS

Lowest Insurance

**"Where Service Counts"**

Storage Distribution and Forwarding

**BROKERS OFFICE & WAREHOUSE CO.**

—Bonded—

Fireproof

143 North Rock Island Ave.



Private Siding. Direct Connection all Rail-  
way Lines Entering City.

Centrally Located in the Jobbing District  
and to Railway Stations.

Send us a carload and watch closely.

M. E. Cuykendall, Mgr.

LEXINGTON, KY.

**W. R. MILWARD  
Furniture Storage**

Packing and Shipping

LEXINGTON 159-161-163 North Broadway KENTUCKY

ESTABLISHED 1879

LEXINGTON, KY.

**THE UNION  
TRANSFER and STORAGE  
COMPANY, Inc.  
THREE LARGE  
WAREHOUSES**

Fireproof and Non Fireproof. Centrally Located.  
Warehouses on Private Sidings. Free Switching Charges.  
DISTRIBUTION OF POOL CARS A SPECIALTY  
MERCHANDISE AND HOUSEHOLD GOODS  
WE FURNISH MOTOR TRUCKS AND TEAM SERVICE  
Member American Chain of Warehouses

WICHITA, KANSAS

A. F. JONES, Pres. E. W. JONES, Vice-Pres. L. B. JONES, Treas.  
J. H. BRUGH, Sec., Gen. Mgr.



**General Warehousing  
Storage, Forwarding and Distributing**

300,000 SQUARE FEET

CAPITAL \$100,000.00



**Three Warehouses (Fireproof)**

Low Insurance. Complete Retail Connections. We Lend  
at Current Rates Upon Our Own Warehouse Receipts.

**UNITED WAREHOUSE CO.**

Wichita, Kansas  
115 N. Meade & 815 E. 2nd

Kansas City, Mo.  
2114 Central St.

LOUISVILLE, KY.

**Carry Spot Stocks in Louisville**

Where Concentrates the Golden Flood  
of Ohio River Valley Commerce

**Louisville Public Warehouse Co.**

W. N. Cox, President.

E. H. Bacon, Vice-President



LOUISVILLE, KY.

**"We Know How"**

**OK  
STORAGE &  
TRANSFER Co.**

INCORPORATED

**OPERATING WAREHOUSES**

MEMPHIS—LOUISVILLE—NEW ORLEANS—LITTLE ROCK

## LOUISVILLE, KY.

**SAFETY TRANSFER AND  
STORAGE CO., INC.***"Louisville's Leading Movers & Packers"*Clay and Main Streets  
We Move, Pack, Store and Forward Household  
Goods  
Member N. F. W. A.

## LOUISVILLE, KY.

**Tabb Storage Warehouse  
and  
Freight Transfer Line**

Established 1875

C. S. Tabb's Son, Mgr.

**NEWSPRINT—RAILWAY STORAGE****GENERAL HAULING**

## NEW ORLEANS, LA.

**NEW ORLEANS****In the heart of the  
Commercial District**

at New Orleans we have a distrib-  
uting depot for package freight,  
operated for the particular serv-  
ice of the traffic manager by a  
specialized organization that  
will handle orders as  
promptly and efficiently  
as your own ship-  
ping depart-  
ment.

Central  
Distributing  
WarehousesShipside  
Terminals

Commercial Warehouse

Alabo Warehouse

The most centrally located  
warehouse in the cityThe only public warehouse  
in New Orleans on the water  
front—wharf facilities for  
the largest ocean steamers**COMMERCIAL  
WAREHOUSES**

The Men Who Distribute

**H. O. Cereal**Read **DISTRIBUTION & WAREHOUSING**  
and consult the Shippers' Index

## BANGOR, MAINE

**McLAUGHLIN WAREHOUSE CO.**

Established 1875

Incorporated 1918

**General Storage and Distributing**Rail and Water Con-  
nection—Private SidingMember  
American Chain of Ware-  
houses  
American Warehouse-  
men's Association  
National Furniture Ware-  
housemen's Association

## PORTLAND, MAINE

**Atlantic Storage & Warehouse, Inc.**  
71-85 Kennebec St. PORTLAND, MAINE**Warehousing and Distribution Service**Household Goods  
Moving—Storing—Packing  
Shipping  
Special heated room for Pianos  
Separate locked rooms for  
FurnitureGeneral Merchandise  
Light and Heavy Hauling—  
Storing—Forwarding  
Pool car distributionModern fireproof warehouse—Reinforced concrete construction  
Private track—Free switching with all roads.Dependable — Expert — Guaranteed  
Warehouse Service for Foodstuffs and Non-Odoriferous  
Commodities

## PORTLAND, MAINE

**Galt Block Warehouse Company**  
Portland, Maine**Storage, General Merchandise, House-  
hold Goods and Automobiles**Private track, sprinkler equipped, low insur-  
ance rate. Storage in Transit on Flour,  
Cereals and Canned Goods.Office, 20 Commercial St., Portland, Maine  
J. S. SAWTELLE, Manager

## BALTIMORE, MD.

THOS. H. VICKERY, President

**BALTIMORE STORAGE CO.**

1710-20 Edmondson Avenue

Charles and 26th Sts.

Bruce St. and Summit Place

Member { N. Y. F. W. A.  
{ Balt. F. W. A.

Operates 3 Warehouses.

## BALTIMORE, MD.

Established 1904

**Central Warehouse Company, Inc.**

517-525 W. Baltimore St.

**Merchandise Storage & Distribution**Railroad Connections - - - Low Insurance  
Motor Truck Service



**BALTIMORE, MD.**

Main Office: 34 S. Eutaw St. Whses.: 1019-21, 1206-08 Ridgley St.  
Est. 1896

**DAVIDSON TRANSFER  
& STORAGE CO.**

"Baltimore's Leading Movers"  
FURNITURE PACKED, SHIPPED OR STORED.

**BALTIMORE, MD.**

Established 1879

**MONUMENTAL STORAGE  
& CARPET CLEANING CO.**

1110-1116 PARK AVENUE, BALTIMORE, MD.  
ABSOLUTELY FIREPROOF WAREHOUSE  
FURNITURE STORAGE—PACKING—MOVING  
CARPET CLEANING  
Members N. F. W. A. and B. F. W. A.

**BALTIMORE, MD.**

**FIDELITY  
STORAGE CO.**

2104-6-8-10 Maryland Avenue

Household Goods Exclusively  
Your Clients Efficiently Served  
All Collections Promptly Remitted

Members Baltimore Furniture Warehousemen's Association,  
National Furniture Warehousemen's Association.

Baltimore's Modern Fireproof Warehouse

**BALTIMORE, MD.**

**Security Storage & Trust Company**

Resources Over One Million Dollars

15 W. North Avenue

FIREPROOF WAREHOUSES

MOTOR EQUIPMENT

EFFICIENT SERVICE

TO WAREHOUSEMEN

Members of  
Baltimore Furniture Warehousemen's Association  
National Furniture Warehousemen's Association

**BALTIMORE, MD.**

There Is Profit and Service in



**Long Distance Removals**

Specializing in long distance moving, we cover the principal cities throughout the Eastern section of the United States with regularity. Our experience and facilities will solve your long distance problems.

In addition you will find our service profitable to you and satisfactory to your customers.

Loads or part loads of household goods, office equipment or merchandise to or from Baltimore, Washington, Richmond, Pittsburgh, Cleveland, Youngstown, Buffalo, Philadelphia, Trenton, New York, Albany, Bridgeport, Hartford, Springfield, New London, Providence and Boston or en route.

Utmost care used with special compartments for breakable or fragile articles. Write or phone me when you want quick service. Get particulars of how we make it profitable for you to use our service.

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Home Office 1202-4 Edmondson Ave.

Day and night phone and telegraph service—  
Gilmer 2132—3

New York Office—1247 E. 87th St., Brooklyn  
Call Day or Night SKIDMORE 1822

**HAGERSTOWN, MD.**

**HAGERSTOWN STORAGE & TRANSFER CO.**

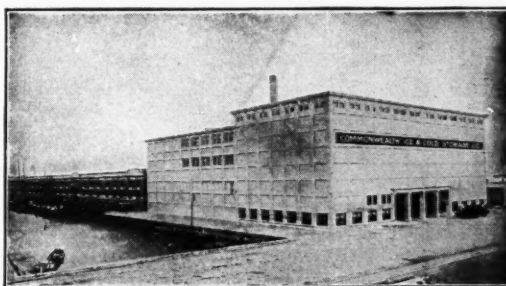
GENERAL MERCHANDISE STORAGE  
HOUSEHOLD GOODS STORAGE—PACKING AND  
SHIPPING—POOL CAR DISTRIBUTION

Penn. R.R. Siding Low Insurance Rate  
Motor Truck Service

**BOSTON, MASS.**

**For Service in Boston  
It's Commonwealth**

*Where Rail Meets Sail*



Cold storage for all classes of perishable merchandise.  
Directly connected side track on New York, New  
Haven & Hartford.

General storage space for all classes of merchandise.  
Perfect local distribution facilities.

**COMMONWEALTH  
ICE AND COLD STORAGE CO.**

220 Northern Avenue, Boston, Mass.

**BALTIMORE, MD.**

Merchandise—Storage

**McCormick Warehouse Co., Inc.**

McCormick Bldg. Rail Connections

## BOSTON, MASS.



FURNITURE AND PIANO MOVERS

HOME, OFFICE and  
LONG DISTANCE MOVING

Having a five story building comprising forty-one thousand square feet devoted exclusively to the Packing and Storing of Household Goods and Office Furniture for shipment.

We are the largest concern in New England doing this kind of work, operating a fleet of trucks for intercity and interstate shipments, also take care of your collections and represent you at this end.

46 Bromfield St.	Main Office	Boston
587 Columbia Road	Dorchester Office:	Dorchester, Mass.
76 Broadway	Packing Department:	South Boston

## BOSTON, MASS.

Dorchester Fireproof  
Storage Warehouse

A complete service since 1880

Packing—Moving—Shipping—Storing  
Your Boston shipments will receive our  
particular attention

MEMBER N. F. W. A.

690 Dudley St.

Boston

## BOSTON, MASS.

## FORT HILL STORAGE WAREHOUSE

415-429 Atlantic Ave.

825 Summer St.

Located in Center of Business Section

GENERAL STORAGE SPACE

AUTOMOBILES

## BOSTON, MASS.

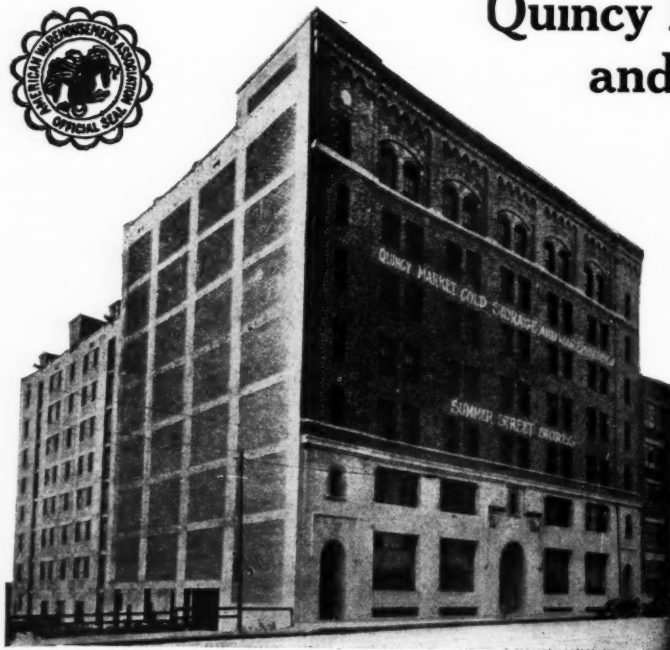
GIBBS EXPRESS CO. YETTEN'S STORAGE  
ESTABLISHED 1845

## POOL CAR DISTRIBUTION

LeBaron R. Yetten

232 State St.

## BOSTON, MASS.



Summer Street Stores, Direct Connection via N. Y., N. H. &amp; H. R. R.

Quincy Market Cold Storage  
and Warehouse Co.STORAGE FOR FREE  
AND BONDED  
MERCHANDISE

## Special Attention Given to Distribution

Charles River Stores, 4,776,000 cu. ft.  
Fireproof Construction—Lowest Insurance  
Rates. Direct track connection with the  
Boston & Maine R. R. Deep Water Con-  
nection—Dock 500 ft. long.

Albany Terminal Stores, 1,430,000 cu. ft.  
Fireproof Construction—Lowest Insurance  
Rates. Direct track connection with the  
Boston & Albany R. R.

Summer Street Stores, 2,000,000 cu. ft.  
Fireproof Construction—Lowest Insurance  
Rates. Direct track connection with the  
New York, New Haven & Hartford R. R.

General Storage Department  
Main Office:

178 Atlantic Ave., Boston, Mass.

**BOSTON, MASS.**

Est. 1894

Inc. 1905

**J. L. KELSO COMPANY**

General Storage Warehouses

1-7 Union Wharf Boston, Mass.

CENTRALLY LOCATED

About equal distance to Steamship and Railroad Lines.  
Connecting all Railroads via Union Freight R. R. Co.  
No switching charge on cars consigned in our care.  
Goods received and delivered from both sides of warehouse.



Our policy: To please our customers and render prompt, efficient and personal service.

Member of

Mass. Warehousemen's Ass'n  
American Warehousemen's Ass'n

**BOSTON, MASS.**

**New Haven Terminal Stores**

Northern Avenue Stores &  
Dock Corporation

308-316 Congress Street, Boston, Mass.

Direct Track Connection  
New York, New Haven & Hartford Railroad

Free and Bonded Storage of Wool  
and General Merchandise

Pool Car Distribution—Prompt Service

Let us submit rates.

**WILLIAM B. HARPER**

Manager



**BOSTON, MASS.**

**WIGGIN TERMINALS, Inc.**

50 Terminal St. Boston (29) Mass.

**STORAGE**

B. & M. R. R.  
Mystic Wharf,  
Boston

N. Y., N. H. & H. R. R.  
E. Street Stores  
South Boston

**SPRINGFIELD, MASS.**

Storage, Forwarding, Distribution  
of Merchandise of All Kinds

**Atlantic States Warehouse  
& Cold Storage Co.**

(Succeeding Eastern States Whse. & Cold Stge. Co.)

Six Million Cubic Feet Capacity

Cold Storage of Food Products

Household Effects Packed for Shipment

General Trucking. Furniture and  
Piano Moving

Executive Office

385 Liberty Street, Springfield, Mass.

NEW YORK OFFICE, 1 Harrison St.

JERSEY CITY, N. J.  
WAREHOUSE  
Consign via  
D. L. & W. R. R.  
Cold Storage Only

LIBERTY DIVISION  
385 Liberty St.  
Springfield, Mass.  
Cold Storage, Merchandise,  
Household Goods

SPRINGFIELD  
WAREHOUSE  
Consign via  
B. & A. R. R.  
Cold Storage Only

LOWELL, MASS.  
WAREHOUSE  
Consign via  
B. & M. R. R.  
General Merchandise and  
Household Goods

**SPRINGFIELD, MASS.**

Daniel J. Curtis, President, Treasurer and  
General Manager

**FURNITURE and MERCHANDISE  
STORAGE and DISTRIBUTION**

FIREPROOF CONSTRUCTION. Low Insurance Rate.  
Correspondence Solicited.

**CENTRAL STORAGE WAREHOUSE, INC.**

270 Liberty Street

Members: A. W. A. and N. F. W. A.

**BRIGHTON, MASS.**



Office: 80-108 Holton St., Brighton, Mass.

General Merchandise Storage and Distributing

Pool Car Shipments Motor Truck Service

Direct Track Connection with the Boston & Albany R. R.

Centrally Located and giving High Grade Service

**NORTHAMPTON, MASS.**

**GLEASON BROTHERS**

Long distance transfer by auto truck  
Building Movers—Crushed Stone, Cement and Mortar Sand  
Storage Warehouse—N. Y., N. H. & H. R. R.

Office 7 Pearl St.—Tel. 413-W  
Member National Furniture Warehousemen's Assn.  
Northampton Baggage Transfer  
Boston & Maine R. R.—N. Y., N. H. & H. R. R.  
Tel. 153

**SPRINGFIELD, MASS.**

**BILL KNEELAND'S MOTOR EXPRESS  
STORAGE WAREHOUSE**

FREIGHT FORWARDERS

Household Goods and General Merchandise

Principal Office: 222 Chestnut St.

Boston Office: 139 Pearl St. N. Y. Office: 325 Hudson St.

POOL CAR DISTRIBUTION

**WORCESTER, MASS.**

**BOWLER  
Storage and Sales Company**

81 Lafayette Street

WORCESTER, MASSACHUSETTS

Logical point of distribution for New England

Our service assures quick deliveries, accurate records, personal interest in every transaction and bigger business in the territory we serve.

Members of American Chain of Warehouses,  
American Warehousemen's Association.



## WORCESTER, MASS.

J. W. MacGregor

George A. Bowker

**GEORGE A. BOWKER, Inc.**

STORAGE WAREHOUSE

Distributors of General Merchandise  
Carload and Pool Lots a SpecialtyNEW BUILDING B. & M. R.R. SIDING  
122-124 Central Street 111-113 Thomas Street  
Reliable Service

## WORCESTER, MASS.

**NORTHEASTERN  
STORAGE & DISTRIBUTING CO.**Storage and Distribution  
of General Merchandise

Pool Car Distribution

Railroad Facilities

## WORCESTER, MASS.

**School Street Storage Warehouse Co.**

44-52 School St.

FIREPROOF WAREHOUSE

Storage, Shipping, Packing of Household Goods  
General Merchandise Distribution; Pool Car Shipment

MEMBERS A. W. A. AND N. F. W. A.

## BAY CITY, MICH.

**The Riverside Truck & Storage Co.**

Storage Household Goods and Merchandise

Pool Car Distribution

25000 ft. Floor Space. Private Siding

Office and Warehouse

2nd and Adams Sts., Bay City, Mich.

## DETROIT, MICH.

GENERAL CARTAGE  
Transfer of Baggage  
Motor TruckingMOVING  
Local and Long Distance  
Storage and PackingWarehouse: 213 Griswold Street  
Canadian License**Baier Transfer & Storage Co.**Daily Truck Service Between Detroit and Toledo  
Forwarders of Household Goods and Autos to Florida  
and Western Coast

DETROIT, MICHIGAN

MEMBERS:

National Furniture Warehousemen's Association  
Michigan Furniture Warehousemen's AssociationMain Office: 142 GRISWOLD STREET  
Main 1496—Cherry 6424

## DETROIT, MICH.

**Detroit Railway & Harbor Terminals Company**  
Clark & West Jefferson AvenuesCombining All Facilities for Water and Railway  
Transportation.

7,000,000 cu. ft. Genl. Stg.

2,000,000 cu. ft. Cold Stg.

Operated by National Terminals Corporation.

(See our advertisement on front inside cover page.)

## DETROIT, MICH.

**Detroit Storage Co.**

A. A. LEONARD, Pres.



MOVING, PACKING, SHIPPING

Corner East Grand Boulevard and Beaubien St.,  
DETROIT, MICH.

Member National Warehousemen's Ass'n.

## DETROIT, MICH.

Your Customers Know

**EDGAR'S SUGAR HOUSE**

9 Merchandise Warehouses in Detroit

No. 1. Lafayette Ave., Cor. 12th St.  
M. C. & C. P. R. R.No. 7 Division and Dequindre, on G.  
T. R. R.No. 2. Alfred and Dequindre Sts.,  
G. T. R. R.No. 8 Foot of 8th St., River, M. C.  
and C. P. R. R.No. 3. Howard and 12th Sts., M. C.  
and C. P. R. R.No. 9 Junction Ave., Penn. Ry., Wa-  
bash & P. M. R. R.No. 4. Clay and Dequindre Sts., M. C.  
G. T. and C. P. R. R.No. 10 Lauderdale Ave. Junction to  
Campbell, P. M. Wabash &  
Union Belt.No. 5. Campbell Ave. and Union Belt  
Ry., Wabash and P. M. R. R.In addition to unequalled service, they offer you reduced insurance  
because of their fireproof construction. Negotiable warehouse receipts  
issued.

## DETROIT, MICH.

**JOHN F. IVORY, Inc.**

Office 6439 Hamilton Ave.

Moving Engineers

Moving Packing Shipping Storage

Warehouse 1338 to 1348 Lafayette Boulevard

Phones: Northway 2714-2982

## DETROIT, MICH.

**MERCHANTS WAREHOUSE CO.**

Storing, Distributing, Forwarding

5620 Federal Ave.

Detroit, Mich.

DETROIT, MICH.

**METROPOLITAN MOVING CO.**

Moving, Storage, Packing, Shipping  
WE MOVE BY VAN WITHIN 1000 MILES  
EVERY LOAD INSURED

Warehouse 1338-48 Lafayette Blvd.

Member D. T. A.

J. A. BLENMAN, Prop., 7430 Beaubien St., Detroit

DETROIT MICH.

**MARVIN SPRAGUE STORAGE**

12620-24 Hamilton Ave.

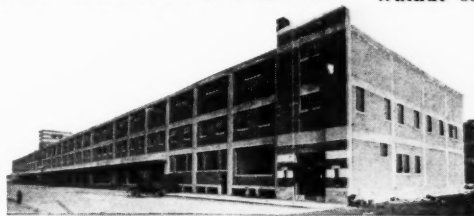
Moving, Packing, Shipping and Storage of Household Goods  
Pool Car Distribution of H.H.G.

DETROIT, MICH.

**Michigan Terminal Warehouse Company**

Brandt Avenue and Wyoming Road.

Telephone  
Walnut 6010



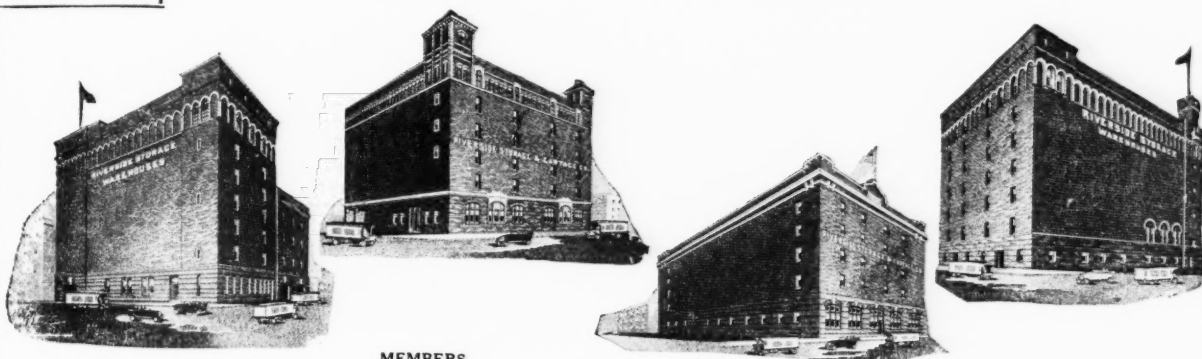
**Detroit's Industrial Warehouse.**

3,000,000 cu. ft. Genl. Stg. 14 Acres for Industrial Development.

Operated by National Terminals Corporation.

(See our advertisement on front inside cover page.)

DETROIT, MICH.



MEMBERS

American Warehousemen's Association  
National Furniture Warehousemen's Association

J. D. DUNN  
President & Treasurer

R. CROUL DICKINSON  
Vice-President

G. H. BREAUULT  
Secretary

**STORAGE—REMOVALS—PACKING—SHIPPING**

**"SERVICE WITH SECURITY"**

Let us represent your interests in Detroit. Every facility is provided for the most efficient handling of your shipments of household effects.

Service personally directed, coupled with efficiency and responsibility, will result in a satisfied customer for you at destination.

**RIVERSIDE STORAGE and CARTAGE CO.**

CASS and CONGRESS STS.

DETROIT, MICHIGAN

DETROIT, MICH.

**CONSIGN CRATED SHIPMENTS**

TO THE ROBINSON STORAGE COMPANY  
434 E. Willis Avenue Detroit, Michigan  
Via MC, Wabash or NYO Russell St. Dely, or GT Trombly St. Dely.

**MOVING**  
Long Distance  
**CRATING**



**STORAGE**  
A Specialty  
**SHIPPING**

**ROBINSON**

GRAND RAPIDS, MICH.

**Largest Commercial Warehouse  
in Western Michigan**

Located within four blocks of  
all principal freight depots

Instant Service. Merchandise Warehouse only. Only warehouse in Grand Rapids operating our own transfer business in addition to the warehouse. We operate 36 horse drawn vehicles and 12 motor trucks. Shipments made same day orders are received. Pool Car Distribution. Private R. R. Siding. Free Switching. Michigan Central R. R.

**COLUMBIAN STORAGE & TRANSFER CO.**  
GRAND RAPIDS, MICH.

GRAND RAPIDS, MICH.

# ANNOUNCEMENT!

## *A New and Thoroughly Modern Warehouse for Household Goods in Grand Rapids*

**T**HE largest and most modern furniture warehouse in western Michigan is ready to serve you.

This new warehouse is five stories in height. The floors and basement have an area of 98,000 square feet.

This warehouse has trunk and rug vaults, art and piano rooms, open storage for small lots, fireproof compartments, barrel room and automobile storage space. A large silver vault provides a safe depository for valuable goods and a special fumigating room is the predominating feature.

The insurance rate is low, equipment and personnel are adequate to assure the efficient handling of goods of every description. The location is ideal. Two through motor highways and street car lines pass the warehouse.

Finally, the service we offer is as thoroughly up-to-date as the warehouse and equipment.

*When you ship to Grand Rapids take advantage of this combination and profit.*

**GRAND RAPIDS STORAGE & VAN CO.**

Lake Drive and Robinson Road

GRAND RAPIDS

MICHIGAN





**GRAND RAPIDS, MICH.**

**Elston Packing & Storage Company**  
Wealthy Street and Charles Avenue, Grand Rapids, Mich.  
Fireproof and Non-Fireproof Warehouses  
100,000 Square Feet  
Storage—Moving—Packing—Shipping  
M. C. RR.—N. Y. C. RR.—G. T. RR.—Penn. RR.—O. L. P. RR.—Mich.  
Elec. RR.

**GRAND RAPIDS, MICH.**

**Kent Storage Company**  
General Merchandise Cold Storage

Storage—Reforwarding—  
Distributing

Members—American Chain of Warehouses  
American Warehousemen's Assn.  
Front Ave. and Pennsylvania Tracks

E. R. McCoy, Gen. Mgr.

**GRAND RAPIDS, MICH.**



**Savings in Costs**

You can add to profits the savings in costs which result in the Michigan territory through spot stocks warehoused with Richards.

RICHARDS has available in Grand Rapids 12 warehouses, completely equipped and carefully classified for the storage of practically every known commodity.

If you will write for information we can quickly show you from actual cases that the savings are well worth while.

**RICHARDS STORAGE CORP.**

Michigan, Ottawa and Ionia Aves.  
Grand Rapids, Mich.  
Branches at Muskegon and Kalamazoo

**GRAND RAPIDS, MICH.**

**Western Michigan Transfer & Storage Co.**

Grand Rapids, Mich.

Established 1908. Most complete facilities for Storing, Moving, Distributing. 2 Warehouses, 100,000 sq. ft. Every modern convenience, resulting in service of the better kind.

**KALAMAZOO, MICH.**

**HASTINGS TRUCK CO.**

Est. 1873

Merchandise Storage and Distribution

Motor Trucks and Team Equipment for all kinds of hauling. Machinery Riggers.

Office in M. C. R. R. Freight House.

**KALAMAZOO, MICH.**

THE LARGEST MERCHANDISE WAREHOUSE  
IN SOUTHWESTERN MICHIGAN  
Private Siding. Free Switching Service.  
Moving—Packing—Storage

**NATIONAL STORAGE COMPANY**

Fireproof Warehouse  
301-311 EAST WATER ST. KALAMAZOO, MICH.

**LANSING, MICH.**

**LANSING STORAGE COMPANY**

The only modern fireproof warehouse in  
Lansing exclusively for household storage.

**RUG—TRUNK—SILVER VAULTS**

WE KNOW HOW  
440 No. Washington Ave.

**SAGINAW, MICH.**

**CENTRAL WAREHOUSE CO.**

GENERAL WAREHOUSEMEN AND FORWARDERS  
MERCHANDISE DISTRIBUTION

SPRINKLER SYSTEM

Private Sidings M. C. R. R. Office  
SAGINAW, MICH. N. Michigan Ave.

**SAULT STE. MARIE, MICH.**

**Booth Bros. Transfer & Storage**

Local and Long Distance Hauling  
Storage of Household Goods and Merchandise  
Office, 621 Bingham Ave., on Terminal Track  
Sault Ste. Marie, Mich.

**DULUTH, MINN.**

Established 1892  
Thirty-Two Years of Experience  
**DULUTH VAN & STORAGE CO.**

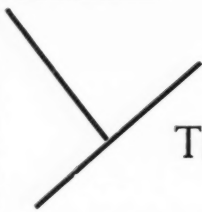
18 Fourth Avenue, West  
Modern Storage Facilities for  
Household Goods & Merchandise  
POOL CAR DISTRIBUTORS  
Located on Terminal Tracks—No Switching Charge

The Men Who Distribute

**Durkee's Salad Dressing**

Read DISTRIBUTION & WAREHOUSING  
and consult the Shippers' Index

## DULUTH, MINN.



## The Proof of The Pudding

The permanent tenants and concerns doing a nation-wide business who use our Terminal for spot stocks are agreed that for:

STORAGE      CONCENTRATING      COLD STORAGE  
DISTRIBUTION      FORWARDING      FINANCING

or

Wholesaling, Manufacturing and "Branch Office" space

## The McDOUGALL TERMINAL

offers the cheapest, most efficient method of reaching that territory in the northwestern quarter of the United States.

Let us tackle your distribution problem for the Northwest.

McDOUGALL      TERMINAL  
WAREHOUSE      COMPANY

Duluth



## DULUTH, MINN.

## SECURITY STORAGE & VAN CO.

14 EAST MICHIGAN ST.

STORAGE AND TRANSFER  
OF HOUSEHOLD GOODS  
AND MERCHANDISE

## POOL CAR DISTRIBUTORS

Located on Terminal Tracks

No Switching Charge

## MINNEAPOLIS, MINN.

When you think of Minneapolis, think of

## BOYD

THE  
REASON  
WHY

Fireproof Warehouse for Household Goods with 1800 steam-heated rooms and compartments.

Freight House for Pool Car Distribution and Merchandise Storage—Trackage for 20 cars.

Thirty Enclosed Vans, reaching every section of Minneapolis and St. Paul. Members A. W. A., N. F. W. A., Can. W. A., Minn. W. A.

Net Resources over \$475,000.00. Thirty-five Years' Experience.

## The Boyd Transfer & Storage Co.

"Specializing in the Care of Household Goods"

The Men who Distribute

## "Jello"

Read DISTRIBUTION & WAREHOUSING and consult the Shippers' Index.

## MINNEAPOLIS, MINN.

# Cameron

## TRANSFER & STORAGE CO.

734-758 Fourth Street North

Distributing and Warehousing Merchandise and Household Goods

Conveniently located in business district. Trackage on C. B. & Q. and G. N. Rys.

Motor Truck and Team Service

Local and Long Distance Hauling

## MINNEAPOLIS, MINN.

## Kedney Warehouse Company

Incorporated

### Fireproof Houses

Merchandise Storage with office and display space, 617 Washington Ave., No.—G. N. & Burlington.

Household Goods Storage, Moving and Packing, 8-10-12 Hennepin Ave. on C. G. W. Tracks.

MEMBERS

A. W. A.    N. F. W. A.    Minn. W. A.

## MINNEAPOLIS, MINN.



## Skellet of Minneapolis

deserves a place at the head of your Minneapolis list. A new warehouse, modern in every detail, and operated by experienced men along most efficient lines. Open storage and private rooms; centrally located on private side track; 21 vans and trucks. Our facilities and service warrant your investigation. We aim to make our customers satisfied.

We take a keen pleasure in making newcomers welcome.

Members:    N. F. W. A.    A. W. A.    Central Club

## SKELLET COMPANY

Main Office

201 South Fifth Street

Minneapolis, Minn.

We operate Callard Company in St. Paul

MINNEAPOLIS, MINN.

# MURPHY

Transfer & Storage Co.

900 Fourth St. North, Minneapolis, Minn.

Fireproof, sprinklered, with the lowest insurance rates, the safety of your goods is not only assured, but at lower cost.

Three railroads connect direct to our platform: the G. N., M. & St. L., and C., B. & Q. All others switch free to us.

ST. PAUL, MINN.

St. Paul Minn.

## BALLARD

FIREPROOF STORAGE & TRANSFER CO.

Distributors and Handlers of  
HOUSEHOLD GOODS

ST. PAUL, MINN.



## CENTRAL WAREHOUSE COMPANY

MERCHANDISE STORAGE and DISTRIBUTION

Saint Paul Midway Minneapolis

Where One Stock Serves the Twin Cities and Northwest  
At the Junction of Nine Railroads  
L. C. L. Shipping Without Carting

20 Warehouses Forty Acres Ground

Six Miles of Trackage

Served by Our Own Electric Locomotives

Motor Trucks for Local Deliveries

Your Patrons in the Northwest

Desire Quick Service

Let Us Help You Give It to Them

MERCHANDISE BONDED and COLD STORAGE  
INDUSTRIAL SITES

Shipping Station

Minnesota

Transfer,

Minn.



Members  
A. W. A., C. W. C.,  
M. W. A.

### DISTRIBUTION SERVICE, INC.

100 BROAD ST. 427 W. ERIE ST. 615 THIRD ST.  
NEW YORK CITY CHICAGO SAN FRANCISCO  
Phone B.G. 5100 Phone Sup. 7180 Phone Sutter 3461

An Association of Good Warehouses  
Located at Strategic Distribution Centers

ST. PAUL, MINN.

## FIDELITY STORAGE & TRANSFER CO.

HIGH GRADE STORAGE ACCOMMODATIONS

Office, 331 Wabasha Street, Corner Fourth St.  
Pooled Cars Distributed, Three Track Warehouses,  
Merchandise and Household Goods

ST. PAUL, MINN.

## KEDNEY WAREHOUSE COMPANY

(INC.)

FIREPROOF STORAGE

Merchandise and Household Goods

Great Northern and Burlington Trackage

ST. PAUL, MINN.

## ST. PAUL TERMINAL WAREHOUSE COMPANY

New, clean, fireproof warehouses.  
Located centrally in jobbing district.  
LCL shipping without cartage.  
Motor Trucks for store door delivery.  
Bonded to the State.

Merchandise Storage and  
Distribution

ST. PAUL



JACKSON, MISS.

## RICKS

Storage & Distributing Company  
BONDED WAREHOUSEMEN

Mississippi's Largest Warehouse

General Merchandise and Household Goods  
Storage and Distributing

Modern Brick Buildings

Private Siding I. C. R. R.

Motor Truck Service

Members: American Warehousemen's Ass'n  
National Furniture Warehousemen's Ass'n

JOPLIN, MO.

## Tonnies Transfer & Storage Co.

1027-43 Virginia Ave.

Joplin, Mo.

Distribution and storage of merchandise  
Fireproof warehouses—Motor van service  
On railroad siding—Lowest Insurance rates

PACKING—STORAGE—SHIPPING

KANSAS CITY, MO.

Members  
N. F. W. A., M. W. A., Can. W. H. A.  
Chamber Commerce, United States

## A-B-C Fireproof Warehouse Co. Four Fireproof Warehouses

Pool Car distribution of Household Goods and Automobiles. The location of our four fireproof warehouses is convenient to all parts of the city's residential districts. Your Kansas City shipments consigned in our care will be handled with a degree of promptness and intelligence that will safeguard your own interests and give an added confidence to your customer. Your interests are always safeguarded.

A-B-C and Kansas City are synonymous  
Think of either and you think  
of the other



## KANSAS CITY, MO.

**Adams Transfer & Storage Co.**  
228-236 West 4th Street, Kansas City, Mo.  
RESPONSIBLE RELIABLE REASONABLE  
*Located in the Heart of the Wholesale District*  
**Merchandise Storage Low Insurance Rates**  
**Pool Car Distribution, Freight Forwarders and Distributors, City Delivery Service Covering City Twice Daily**  
Members: National Chamber of Commerce—Kansas City Chamber of Commerce—American Warehousemen's Association Traffic Club of Kansas City—American Chain of Warehouses.

## KANSAS CITY, MO.

**"NO DRAYAGE"**

Ship Your Pool Cars to Us and Save 25 to 50 Per Cent

No drayage charges on shipments moving beyond Kansas City. All cars handled in our house, thus eliminating damage by exposure to weather incident to handling at open air docks owned by railroad companies. The only charge to the shipper is a nominal fee for handling and checking car, unless shipper assumes cost of cartage on local deliveries from car.  
Fireproof warehouse—reinforced concrete, 120,000 sq. feet available. Automatic Conveyor System. Free Switching, usual absorptions. Transit Rates and Privileges. Negotiable receipts issued. Universal Trap Car to all steam roads, eliminating drayage on "out of town" shipments. Real Service.

Write for rates on "Pool Cars" or Merchandise Storage.

**RADIAL WAREHOUSE COMPANY**

General Office: Radial Bldg., Charlotte and Armour Road  
NORTH KANSAS CITY, MISSOURI

## KANSAS CITY, MO.

Location Plus Service Builds  
Business for You

**Central Storage Co.**

45 Years of Distribution Service  
1422 ST. LOUIS AVE.

**C**ENTRAL **I**NDUSTRIAL **D**ISTRICT  
KANSAS CITY, U.S.A.  
**OVER-NIGHT SHIPPING SERVICE**

## ST. LOUIS, MO.

**A R R O W**

Fireproof Storage & Moving Co., Inc.  
4116 N. UNION BLVD.

CONCRETE CONSTRUCTION  
FIREPROOF WAREHOUSE  
FOR FURNITURE

Merchandise Storage and Distribution

Bonded Warehouse On Terminal Switch For Car Lots  
ST. LOUIS, MO.

## KANSAS CITY, MO.

Consign to our Bonded Fireproof Warehouse

**HITE BROTHERS**

STORAGE AND TRANSFER COMPANY  
31st and Highland, The heart of the residential district  
RECEIVING, PACKING, SHIPPING  
AND  
STORING, MOVING, DISTRIBUTION  
OF HOUSEHOLD GOODS AND MERCHANDISE

## KANSAS CITY, MO.

Every facility for the distribution of pool car merchandise, insuring a service only comparable with the best to be had.

1900 Central St.  
Kansas City Missouri

L. J. KISSICK  
President

J. H. KISSICK  
Vice-President



The Men Who Distribute

**Climalene**

Read DISTRIBUTION & WAREHOUSING  
and consult the Shippers' Index

## ST. LOUIS, MO.

**Merchandise Storage**

We beg to announce the opening of our new 2-acre warehouse on tracks with modern facilities for handling merchandise storage. Correspondence is invited

**General Warehousing Co.**

Delmar at Euclid

ST. LOUIS, MO.

ST. LOUIS, MO.

**BEN A. LANGAN**  
**FIREPROOF STORAGE CO.**

5201 to 5209 Delmar Ave.  
ST. LOUIS

Expert Movers and Forwarders of  
HOUSEHOLD GOODS

Our Auto Van Service is Unexcelled  
Your Interests Will Be Safely Guarded

ST. LOUIS, MO.

Avoid the Details of Shipping—Concentrate on Sales  
Storage—Pool Car Distribution—Cartage  
Office Space and Rental  
Track Connection All Railroads

MEMBERS:

A. W. A. M. W. A. D. S. I.  
ST. LOUIS CHAMBER COMMERCE

**S. N. LONG WAREHOUSE**

Ninth and Gratiot Sts. St. Louis, Mo.

ST. LOUIS, MO.

**The St. Louis Gateway.**

Goods laid down on our floors in St. Louis are within a few hours of a million and a half purchasers, while 775,000 are right outside the doors. With our downtown location and excellent reshipping facilities you can serve this mammoth population at minimum expense. We co-operate in serving your interests in this territory. We make a specialty of the storage of automobiles.



**Pennsylvania Terminal Warehouse Co.**  
*of St. Louis, Missouri.*

R. F. Abernathy, Resident Mgr.

HASTINGS, NEBR.

**Borley Storage & Transfer Co., Inc.**  
Pool Car Distributor

STORAGE—FURNITURE  
MERCHANDISE

HAULING, LIGHT & HEAVY  
TWO WAREHOUSES

Private Railroad Siding  
All Railroad Connections

OMAHA, NEBR.

16TH & LEAVENWORTH, OMAHA, NEBR.

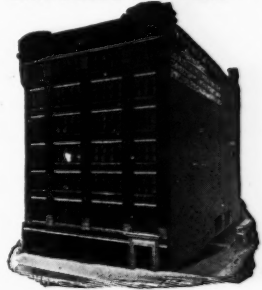
**BEKINS**  
**VAN & STORAGE CO.**

MOVING SHIPPING PACKING STORING

Sioux City, Iowa.  
Seattle, Wash.  
Tacoma, Wash.  
Portland, Ore.  
Vancouver, B. C.  
Los Angeles, Cal.  
San Francisco, Cal.  
Oakland, Cal.  
Fresno, Cal.  
Hollywood, Cal.  
Sacramento, Cal.

OMAHA, NEB.  
& COUNCIL BLUFFS, IOWA

State Bonded Warehouses



813 Douglas St.

Complete equipment, manned by capable, experienced crews, captained by seasoned warehousemen, are at your service here. Whatever you expect of a warehouse you may expect of Ford, and find it done in the best manner possible.

**FORD**

"Gets There Regardless"

**Transfer & Storage Co.**

Local Shipments Efficiently Handled by 17 Trucks  
Private Sidings  
Pool Car Distribution and Reforwarding  
Fireproof Warehouse  
Moving Packing Shipping



700 So. Main St.

Omaha, Nebr.

813 Douglas Street

Council Bluffs, Ia.

700 S. Main Street

OMAHA, NEBR.

**GORDON**

**Fireproof Warehouse & Van Co.**

Main Office: 219 North 11th Street

Four warehouses on track, equipped with automatic sprinkler systems.

Accommodations for brokers, jobbers, automobile manufacturers, etc.

Household Goods Packed, Stored and Forwarded

MEMBER:

American Warehousemen's Association.  
Central Warehousemen's Club.  
National Furniture Warehousemen's Association.



**Pluck and Business  
Enterprise**

**All in One Word  
"Advertise"**

## OMAHA, NEBR.

**OMAHA'S LARGEST  
MERCHANDISE WAREHOUSE**

offers to the Storing Public the IDEAL warehouse and distributing service in the middle west.

We have the location, facilities and equipment to properly handle your products; add to these personal attention and your warehouse problem is solved.

*The Omaha Storer*

**MERCANTILE**  
**Storage & Warehouse Company**

**OMAHA**

## OMAHA, NEBR.

**Pacific Storage & Warehouse Co.**

1007-9-11 JONES STREET

Merchandise Storage and Distribution — Pool cars solicited  
Private Siding — Motor Trucks

Our Warehouse is in the Center of the Jobbing and Business District.

**SERVICE THAT SATISFIES IS OUR MOTTO**

Members of the Central Warehousemen's Club, American Warehousemen's Ass'n.

## OMAHA, NEBR.

**Terminal Warehouse Company**

702-712 S. Tenth Street

CENTRALLY LOCATED  
POOL CAR DISTRIBUTION.  
MERCHANDISE STORAGE AND TRANSFER.  
IMPLEMENTS STORAGE AND TRANSFER.  
COMPLETE HOUSEHOLD GOODS SERVICE.  
WE RECIPROCATE.

## ASBURY PARK, N. J.

Reference any bank in our city

**Anderson's Express & Storage**  
**Brinley and Railroad Ave.**

Packing, Crating, Storage and Shipping of  
Household Goods

Merchandise Storage and Distribution—Pool Cars, Heavy Duty  
Hauling—Long Distance Moving, R.R. Siding N. Y. & L. B. R.R.

## ASBURY PARK, N. J.

**A. G. ROGERS, 904 Sewall Ave.**  
**Fireproof Storage Warehouse**

Storage, Parking, or Shipping of Household Goods.  
Merchandise. Storage and Pool Car Distribution.  
Long distance hauling. Reference any bank our city.

## ATLANTIC CITY, N. J.

**ELDREDGE EXPRESS and STORAGE  
WAREHOUSE CO.**

Office: 110 N. South Carolina Avenue  
Inter-City Auto Service Heavy Hauling



Railroad  
Siding and  
Storage Yard

Storage for  
Goods and  
Merchandise  
Piano Moving

Phone 108

## CAMDEN, N. J.

C. S. & E. J. ZEIGLER, Proprietors

**The Park Storage Warehouse Co.**

Main Office and Warehouse:  
HADDON AVE. AND PINE ST., CAMDEN, N. J.



Estimates Cheerfully Given

Phones, Bell 1299, Eastern 34651

**Storage, Moving, Packing and Shipping**  
**AUTO VANS—NO ROAD TOO LONG**

Member: N. F. W. A. & N. J. F. W. A.

## CAMDEN, N. J.

**MANUFACTURERS' DISTRIBUTORS**

Direct delivery service throughout Philadelphia  
and Camden—: : Correspondence solicited.

Address

**TROTH TRUCKING & WAREHOUSE CO.**

Office—5th and Byron Streets, CAMDEN, N. J.

## EAST ORANGE, N. J.

Established 1870

**COYNE STORAGE WAREHOUSES**

349 Main St.

36 No. Clinton St.

**STORING**

**MOVING**

**PACKING**

**Household Goods**

Member of N. F. W. A.—N. J. F. W. A.

## EAST ORANGE, N. J.

**JACOB DIETRICH**

**Storage, Moving, Packing and Shipping**

Oranges and Maplewood—Padded Motor Vans

My satisfied customers cover a period  
of over 30 years. Shipments solicited.

138 Eaton Place, EAST ORANGE

The Men Who Distribute

**Gulf Lubricants**

Read **DISTRIBUTION & WAREHOUSING**  
and consult the Shippers' Index



**EAST ORANGE, N. J.** Established 1887 R. T. BLAUVELT, President

### Lincoln Storage Warehouses

FIREPROOF NON-FIREPROOF MOTOR EQUIPMENT

Members of the American Warehousemen's Association and  
National Furniture Warehousemen's Association

Principal Office, 85 MAIN STREET

**NEWARK, N. J.**

Distribution Service

### ESSEX WAREHOUSE CO.

600 OGDEN ST., NEWARK, N. J.

A. W. A.  
N. J. M. W. A.

Merchandise Storage

**EAST ORANGE, N. J.**

"Where Promise Means Performance"

### Meadowbrook Storage Warehouse Co.

Successors to

WATSON'S FIREPROOF STORAGE WAREHOUSE

195-201 MCKINLEY AVE.

EAST ORANGE, N. J.

**HACKENSACK, N. J.**

### GEO. B. HOLMAN & CO., Inc.

STORAGE SHIPPING PACKING

HOUSEHOLD GOODS EXCLUSIVELY

Most Modern Equipment in North Jersey

Complete Warehouse Service

Motor Vans for Local & Long Distance Hauling

Members N. J. F. W. A. and N. F. W. A.

**HARRISON, N. J.**

NEWARK—THE ORANGES

### Security Storage Warehouses

412-20 Harrison Ave.

John O'Connor, Prop.

Merchandise and Household Goods

Warehousing and Distribution

Regular daily distribution service between Greater  
New York and the Newark Territory

Members A. W. A. and N. F. W. A.

**JERSEY CITY, N. J.**

Members: N. J. F. W. H. A.  
National F. W. H. A.

### Goodman Warehouse Corporation

830 Bergen Avenue, Jersey City, N. J.

Most Modern Fireproof Warehouse in the State.

Bayonne Warehouse:—21 W. 20th Street.

**LONG BRANCH, N. J.**

### James Calkins & Co.

Storage Warehouse

Storage, Packing and Shipping of Household Goods

Distribution of General Merchandise

Pool Car Distribution

Direct R. R. Siding—N. Y. & L. B. R. R.

**MONTCLAIR, N. J.**

### THOMAS H. GIBBS

STORAGE, PACKING, SHIPPING of FINE  
HOUSEHOLD GOODS

ORANGES Motor Truck Service—Serving CALDWELL BLOOMFIELD

**NEWARK, N. J.**

Fine,  
Clean,  
New,  
H H G  
Vaults.  
Central  
Location.  
Equip-  
ment  
for  
handling  
your  
consign-  
ments  
promptly  
and  
intelli-  
gently.



### Knickerbocker Storage Warehouse Company

Newark's Leading Warehouse

96 to 106 Arlington Street

John Mulligan, Pres.

Wm. Mulligan, Vice-Pres.

James E. Mulligan, Sec. and Mgr.  
MOVING, PACKING, DISTRIBUTION, SHIPPING, MOTOR  
EQUIPMENT

Member N. F. W. A. and N. J. F. W. A.

**NEWARK, N. J.**

### JOS. J. KROEGER

Tel. Market 7372

Storage—Fireproof or Non-Fireproof  
Motor Trucks for Long Distance Moving

546-552 Central Ave.

Some people need "3 fingers" of old Scotch,  
And then three more—it wouldn't hurt them  
much—

If only to light up their drowsy eyes,

Bestir themselves and Start to advertise.

"Pop."

NEWARK, N. J.



# Distribution

—Solving the Problem  
at the great

## KENNA TERMINAL

To get the goods we manufacture from where they are made to where they are wanted, most speedily, directly and economically and with least handling—that is what we must accomplish if we are to serve humanity and industry adequately and profitably.

Enterprising financiers and great corporations have taken a hand in trying to solve this problem of distribution.

### Six Million People Within Ten Miles

In all parts of the country efforts have been and are being made to meet local conditions. Here, in the most congested area in the country—the great metropolitan district, with its 6,000,000 or more people within a radius of 10 miles, and its 17,000,000 within 100 miles—that task of distributing goods we manufacture as well as the goods from all over the world, which we use—has become most acute. Here the problem reaches its peak. And here it must be met.

New York and Newark with their port developments have helped mightily, but outstanding among the developments of the past few years is the conversion of the U. S. Army Supply Base, created during the late war because of its strategic position for storage and distribution to all ports of Eastern United States and to foreign ports as well—into a great terminal for warehousing, light manufacturing and distributing.

### Covering Eastern States

Kenna Terminal, as it is now known, affords facilities unequalled for the distribution of merchandise—not only to Manhattan, but to the entire East—not only by train and boat, but by motor truck.

All the great trunk line railroads entering the Port of New York converge in Newark. There are three break-up yards in the immediate vicinity of Port Newark, and four more within a five mile radius.

Over 85 per cent of the rail traffic entering the Port of New York passes through Newark and eventually reaches New York piers by means of lighterage.

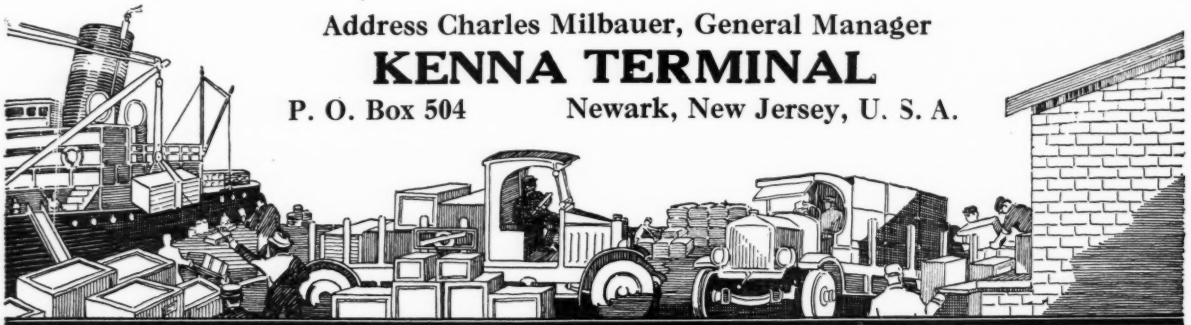
*Further Facts, Maps, Diagrams, etc., on request.*

Address Charles Milbauer, General Manager

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General Merchandise Storage  
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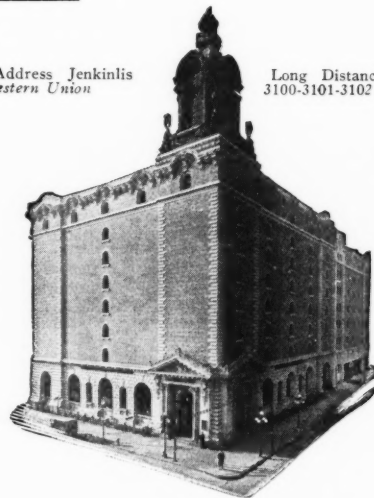
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Three modern warehouses.

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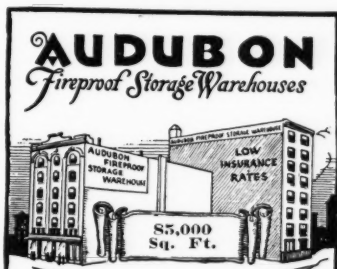


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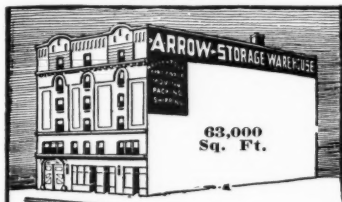
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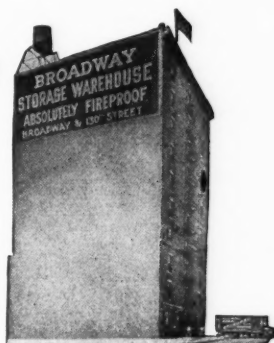
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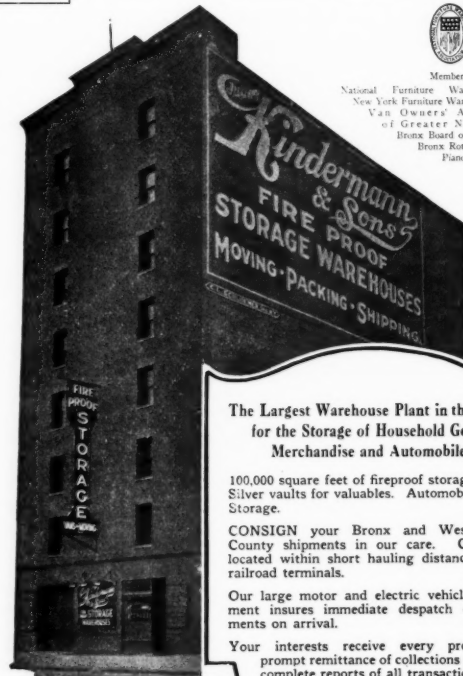
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Established 1875



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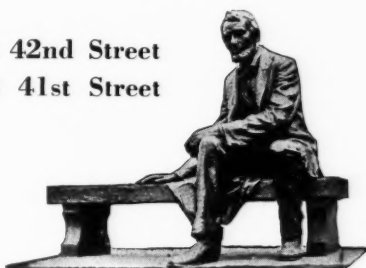
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We All Well Know the Saying;

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**B. R. & P. Warehouse, Inc.**

E. D. Davis, President

Rochester, N. Y.

ROCHESTER, N. Y.

Arthur S. Blanchard, President

**Blanchard Storage Co., Inc.**

Storage  
Moving

HOUSEHOLD GOODS

Packing  
Shipping

FIREPROOF AND NON-FIREPROOF WAREHOUSES

Main Office: Broad at Oak St.

Members N. F. W. A. and A. W. A.

ROCHESTER, N. Y.

**J. C. Clancy Carting Company**

Service Since 1885

Office: Webster Cor. Grand Ave.

Household Goods—General Merchandise

Fleet of Motor Trucks for Local and Long Distance Work

ROCHESTER, N. Y.

Pool car distribution and forwarding.

Warehouses for merchandise and household goods

Motor vans for local and long distance moving.

**B. G. COSTICH & SONS, INC.**

271 Hayward Ave.

Rochester, N. Y.

ROCHESTER, N. Y.

Storage of automobiles and general merchandise—N.Y.C.

R.R. siding—Pool Car Distribution—Motor Service.

**Monroe Warehouse Company, Inc.**

Established 1823

1044 University Ave.

ROCHESTER, N. Y.

Members N.F.W.A., A.W.A., N.Y.F.W.A.

**ROCHESTER STORAGE WAREHOUSES**

Fireproof and Non-Fireproof

Owned and Operated by

**ROCHESTER CARTING CO.**

Storage Moving Packing Shipping

ROCHESTER, N. Y.

**JOSEPH A. SCHANTZ CO.**

171 to 219 Central Avenue

Separate Fireproof Locker Rooms. Motor Vans  
for City and Long Distance Moving. Storage  
and Packing Household Goods. Warehouse  
Space. Negotiable Receipts Issued.

Member New York Warehousemen's Assn.

SCHENECTADY, N. Y.

**CAMPBELL'S WAREHOUSE**

740 Brandywine Ave.

Founded 1902

PACKING, SHIPPING and STORAGE of HOUSEHOLD  
GOODS EXCLUSIVELY

Correspondence invited

SYRACUSE, N. Y.



"A Good Sign of Real Service"

**DIETS STORAGE WAREHOUSE**

OFFICE: 108 WILKINSON ST.

SYRACUSE, N. Y.

**Flagg Storage Warehouse Co.**

SYRACUSE, N. Y.

Consign your Household Goods Shipments in our care

MOVING — STORAGE — PACKING — SHIPPING

Mdse. Storage

Private Siding

Pool Cars Handled

## Pluck and Business Enterprise

## All in One Word

## "Advertise"

## SYRACUSE, N. Y.

**KING STORAGE WAREHOUSE, INC.**Opposite N. Y. C.  
West St. Station**COMMERCIAL and FURNITURE STORAGE**Automatic Sprinkler System Throughout Affording Our  
Customers Low Insurance Rate

Private Railroad Sidings

**DISTRIBUTING SERVICE**

Carload or less carload shipments will receive prompt and careful attention. This branch of warehousing has been a specialty with us for over twenty years. We maintain our own delivery service.

**HOUSEHOLD GOODS**

We solicit your Syracuse business. Motor delivery service. Careful attention to collections. Satisfaction to yourself and customer guaranteed.

**FOR SAFETY WE SHIP FURNITURE IN THE KING SHIPPING CASE****358-376 WEST WATER ST.****MEMBERS**American Warehousemen's Association  
National Furniture Warehousemen's Association

## UTICA, N. Y.

**Broad Street Warehouse Corporation**

700 Broad Street

Announces the Opening of a

**MODERN STORAGE WAREHOUSE**

Consisting of

100,000 Sq. Ft. of Floor Space. Private Siding. Low Insurance Rates. Sprinklered and Heated. Private Offices for Manufacturers' Representatives.

Modern Facilities for

**STORAGE DISTRIBUTION  
PACKING FORWARDING**

Of Merchandise, Automobiles, Household Goods

**"IN THE HUB OF NEW YORK STATE"**

## UTICA, N. Y.

**Jones-Clark Trucking & Storage Co.**

of Utica, N. Y.

The Heart of New York State and natural distributing point. "Jones of Utica" has distributed Merchandise and Household Goods for 25 years. Every modern facility.

## UTICA, N. Y.

**Seneca Warehouse Co., Inc.**

125,000 sq. ft. of Fireproof Storage.

Insurance rate 12c.

Private R. R. Siding—6 Cars.

**MERCHANDISE—POOL CAR DISTRIBUTION.**

## WATERTOWN, N. Y.

**WINSLOW TRUCKING CO., Inc.****GENERAL STORAGE, TRUCKING AND TRANSFER****FIREPROOF WAREHOUSE LARGEST IN NORTHERN NEW YORK****Moving, Packing, Shipping**

Members: N. F. W. A. and A. W. A.

## WHITE PLAINS, N. Y.

**CARPENTER STORAGE, INC.**

29-31 Brookfield St.

Also serving  
Tarrytown  
Scarsdale  
Hartdale  
Mamaroneck  
Portchester  
LarchmontOne of the most modern and best equipped  
Storage Warehouses in Westchester.  
Household Goods Exclusively  
Low Insurance Rate  
Packing—Crating—Shipping  
Members N.Y.F.W.A.

## YONKERS, N. Y.

Office Telephone 815

**Dobson's Storage and Motor Vans****Packing, Crating and Shipping  
Furniture Bought and Sold**

Residence Telephone 3898

**222 New Main Street and 19 Morgan Street,  
Yonkers, N. Y.**

## YONKERS, N. Y.

**McCann's Storage Warehouse Co.**

3 MILL ST.

**Fireproof Storage Warehouse**

Strictly modern in every respect. The largest and latest in Westchester County—serving entire county.

## CHARLOTTE, N. C.

**Carolina Transfer & Storage Co.**

211 W. 1st St., Charlotte, N. C.

Bonded fireproof storage.

Household goods and merchandise.

Pool cars handled promptly. Motor Service.

Members A. W. A. and N. F. W. A.

## CHARLOTTE, N. C.

**Union Storage & Warehouse Co.****BONDED****General Merchandise Storage and  
Distribution.****Chemicals, Textile Goods,  
Cotton, etc.****Private Sidings. Members A. W. A.**

The Men Who Distribute

**Root Beer Supplies****Read DISTRIBUTION & WAREHOUSING  
and consult the Shippers' Index**



**GREENSBORO, N. C.**

*Consign your cars to us for  
prompt and efficient handling*

**125,000 square feet floor space.**

**A—Insurance Rating**

**Private sidings.**

**GREENSBORO WAREHOUSE  
AND STORAGE COMPANY**

**Greensboro, N. C.**

*Est. 1904*

*Bonded*

**GREENSBORO, N. C.**



**Rucker Bonded Warehouse Corporation**

**Greensboro, North Carolina**

**Storage of Merchandise—Forwarding Merchandise.**

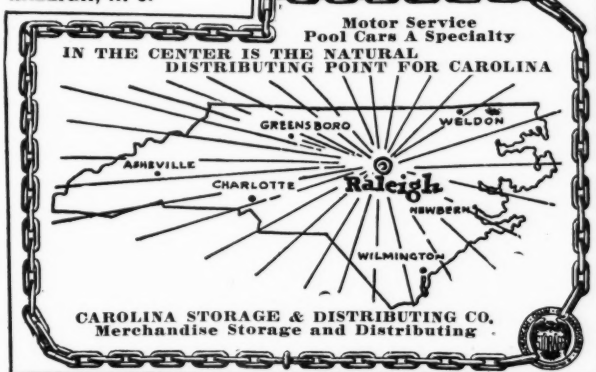
**Private Railroad Sidings. Sprinkler System.**

**Low Insurance Rate.**

**Pool Cars Handled Quickly.**

**MEMBERS: A. W. A.**

**RALEIGH, N. C.**



**Motor Service**

**Pool Cars A Specialty**

**IN THE CENTER IS THE NATURAL**

**DISTRIBUTING POINT FOR CAROLINA**

**CAROLINA STORAGE & DISTRIBUTING CO.**

**Merchandise Storage and Distributing**

**WASHINGTON, N. C.**

**Beaufort County Storage Warehouse Co., Inc.**

**(Bonded)**

**General Merchandise Storage and Distribution**

**For All of North Carolina and South**

**Direct A. C. L. siding. W. & V. switching arrangements with  
Norfolk & Southern**

**WINSTON-SALEM, N. C.**

**LENTZ Transfer Company**

**Storage Warehouses**

**Packing, Storing, Shipping of Household Goods**

**General Merchandise Storage and Distribution**

**Direct Norfolk & Western Siding**

**Motor Truck Service**

**FARGO, N. D.**

**UNION TRANSFER COMPANY**

**(BONDED WAREHOUSE)**

Three warehouse units total of 126,000 sq. ft. of floor space.  
Merchandise, agricultural implements, household goods.  
Ship pool cars and spot stocks in our care. No car switch-  
ing charges. Nineteen Years of Service.

**806-810 Nor. Pac. Ave.**

**AWA—ACW—Minn. WA**

**GRAND FORKS, N. D.**

**KEDNEY WAREHOUSE COMPANY**

**(INC.)**

**FIREPROOF STORAGE**

**MERCHANDISE AND HOUSEHOLD GOODS**

**Office Facilities—Great Northern Trackage**

**Members A. W. A., Minn. W. A.**

**AKRON, OHIO**

**THE CITY VIEW  
APARTMENT and STORAGE CO.**

**LARGEST FIREPROOF STORAGE CO. IN AKRON**

**Commercial and Household Goods**

**LOCATED IN THE HEART OF AKRON  
on B & O RAILWAY — FREE SWITCHING**

**AKRON, OHIO**

**The W. Lee Cotter Warehouse Company**  
**Cor. Mill & College St.      97 E. South St.**

**Household Goods, Storage,**

**Moving, Packing**

**Member N. F. W. A.**

**Merchandise Storage**

**Motor Freight Service**

**Member A.W.A.**

**AKRON, OHIO**

**The KNICKERBOCKER  
WAREHOUSE and STORAGE CO.**

**36 CHERRY STREET**

**HOUSEHOLD GOODS AND MERCHANDISE**

**FIREPROOF WAREHOUSE**

**MOTOR TRUCKING**

**CANTON, OHIO**

**The Canton Storage Co.**

**528—4th Street, N. E.**

**Canton, Ohio**

**Draying, Storing, Shipping and  
Carting. Also Cold Storage and  
Distributing Car Loads and Less.**

**CANTON, OHIO**

**Our Experience and Modern Facilities Make  
Us More Than Just a Warehouse**

**STORAGE—DISTRIBUTION—DRAYING**

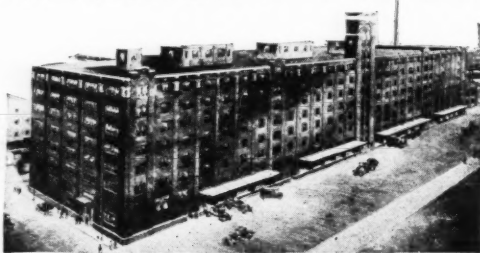
**THE CUMMINS STORAGE CO.**

**Private Sidings**

**Free Switching**

## CINCINNATI, OHIO

Cincinnati Terminal Warehouse Co.  
Central Ave. and Augusta St. Telephone Main 106



**Largest Fireproof Warehouse in Ohio.**  
7,500,000 cu. ft. Gen'l. Stg. 1,500,000 cu. ft. Cold Stg.  
Operated by National Terminals Corporation.  
(See our advertisement on front inside cover page.)

## CINCINNATI, OHIO

# STORAGE

## Warehousing and Distributing

CAPACITY OVER 300,000 SQ. FT.  
Sprinkler System.

### Low Insurance Rate

Railway siding.  
Prompt and efficient services.

WAREHOUSE RECEIPTS ISSUED BY US  
ARE READILY NEGOTIABLE FOR CASH

**The Cincinnati Tobacco Warehouse Co.**

CENTRALLY LOCATED  
No. 7 W. Front St., Cincinnati, Ohio

## CINCINNATI, OHIO

Officers—Fred Pagels, President; Arthur Pagels, Secretary;  
R. W. Pagels, Treasurer.

## The Fred Pagels Storage Co.

Fireproof and Non-Fireproof

Business Established in 1867 and built up by

**A SERVICE THAT SATISFIES**

Prompt Deliveries by Motor  
Complete Transfer Facilities

Member  
of  
National Furniture  
Warehousemen's  
Association  
and  
Ohio Furniture  
Warehousemen's  
Association

MAIN OFFICE  
937 West 8th St.  
Four blocks from  
any R. R. entering  
Cincinnati.



## CINCINNATI, OHIO

CONSIGN YOUR HOUSEHOLD GOODS TO  
**The "Al" Naish Moving & Storage Co.**  
3207-13 Madison Road, Oakley Cincinnati, Ohio  
**FIREPROOF STORAGE WAREHOUSE**  
SERVING GREATER CINCINNATI OAKLEY, HYDE PARK  
LONG DISTANCE MOVING A SPECIALTY

## CINCINNATI, OHIO

Established 1858

We are equipped to handle carloads and less than carloads for out of town firms. Warehouse on Pennsylvania Railroad. Motor Truck and Team Service.

**WALLACE TRANSFER & FORWARDING CO.**

222 and 224 East Front Street

Member of { American Warehousemen's Assn.,  
{ American Chain of Warehouses

## CINCINNATI, OHIO

## THE ZEIGLER SCHAEFER COMPANY

(Inc'P'd.)  
Fireproof and Non-Fireproof Storage

Over 100,000 square feet in the heart of Cincinnati

Let Us Store, Move, Pack, Ship or Distribute Your  
Automobiles, Furniture and Merchandise

2000-2020 ELM ST.

Est. 1899

## CLEVELAND, OHIO

THE

## CLEVELAND STORAGE

Incorporated 1884.

CO.

**MERCHANDISE STORAGE**

and

**DISTRIBUTION**

3 Warehouses—Private Siding—C. C. C. & St. L. R. R.  
Conveniently Located in Business and Shipping District

**LOW INSURANCE RATES**

Offices: 619 Guardian Bldg.

## CLEVELAND, OHIO

## Mercantile Storage and General Trucking

Bulk Oil Storage, 125,000 Gallons. Low Insurance. Sprinkler System. Private Siding on C. C. C. & St. L. R. R. Pool Cars for Distribution. Motor Truck Service.

**THE CURTIS BROS. TRANSFER COMPANY**  
Cleveland, Ohio

## CLEVELAND, OHIO

## Ship Your Cleveland Freight

Direct care the Gregg Cartage & Storage Co.  
Freight to and from Depots.

Storage and Delivery on Request.  
Distribution of Samples, Packages and Circulars.

**THE GREGG CARTAGE & STORAGE COMPANY**  
Storage and Warehouse, 633 Huron Road, CLEVELAND, OHIO

## CLEVELAND, OHIO

MEMBERS A.W.A. O.W.A.

**LEDERER**  
**SERVICE**  
**TERMINAL**

**BUILDS BETTER BUSINESS**  
MERCANTILE WAREHOUSING AND DISTRIBUTING

CLEVELAND, OHIO

Interstate Terminal Warehouses, Inc.  
1200 West 9th Street. Telephone Cherry 4170



The Only Cold Storage in Cleveland on Railroad Tracks.

3,500,000 cu. ft. Genl. Stg. 1,500,000 cu. ft. Cold Stg.

Operated by National Terminals Corporation.  
(See our advertisement on front inside cover page.)

CLEVELAND, OHIO

## The Knickerbocker Storage Co.

7724 Detroit Ave., Cleveland, Ohio  
**HOUSEHOLD STORAGE**  
Moving

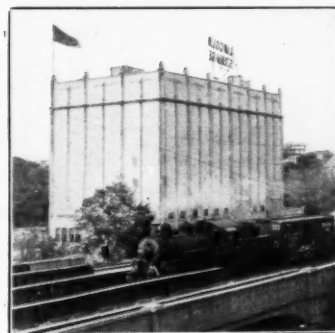
Packing

Shipping

Member American Warehousemen's Assn.

CLEVELAND, OHIO

This shows  
one reason  
we can han-  
dle ship-  
ments as  
fast as you  
send them!



Both of our warehouses are most fortunately situated—  
especially so on Penna., and Nickel Plate R. R.



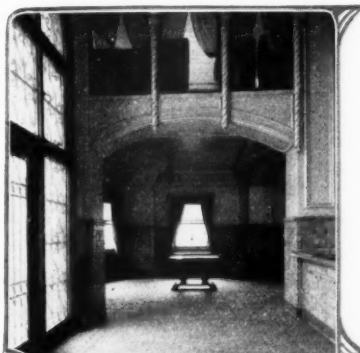
## The LINCOLN STORAGE Co.

Main Office: 5700 Euclid Ave., Cleveland, O.  
Depositories at 5660-5704 Euclid Ave. and  
11201 Cedar Ave.

GEO. A. RUTHERFORD, Pres.  
W. R. THOMAS, Vice-Pres.  
W. H. TURNER, Secy. and Treas.

Car load shipments to our own private siding—  
11201 Cedar Ave., on the N. Y. C. Belt Line  
connecting with all R. Rs. entering Cleveland.  
L. C. L.—Penna., Euclid Ave. Sta. adjoining  
our Euclid Ave. Warehouse. Other R. Rs. to  
Cleveland, Ohio.

Member: N. F. W. A., A. W. A., and C. F. W. A.



# NEAL

## The New West Side-Lakewood Branch

of this company is regarded as one of the finest and most efficient in the  
entire warehouse industry.

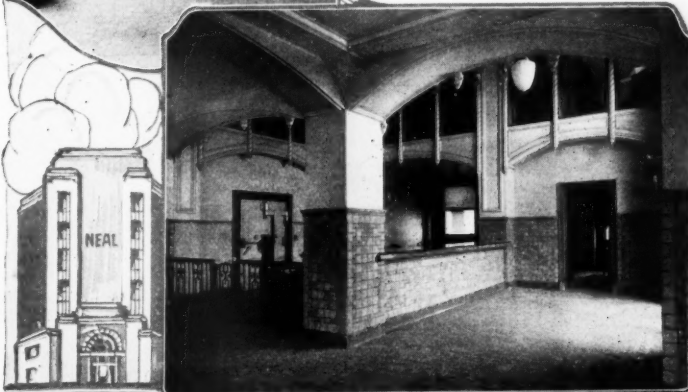
It is complete even to private switch, enabling us to receive and load cars  
entirely within our own building.

Shipments to Cleveland and vicinity may  
be forwarded to us with economy in  
handling and with the assurance that they  
will be given expert attention.

A. W. NEAL  
President

C. J. NEAL  
Vice President

W. R. KISSICK  
Secretary



*The* **NEAL** FIREPROOF STORAGE  
COMPANY CLEVELAND



## CLEVELAND, OHIO

# THE SCOTT BROS. Fireproof Storage Co.

1838-40 East 55th Street



MEMBERS  
[Cleveland Furniture Warehousemen's Association.]  
[National Furniture Warehousemen's Association.]

## E. CLEVELAND, O.

Others as Good



But None Better

See page 362 1926 Directory

## COLUMBUS, OHIO

## The W. Lee Cotter Warehouse Company

32 East Swan St.

Merchandise Storage and Distribution

Motor Freight Service

Member A. W. A., O. W. A.

## COLUMBUS, OHIO

## Consign H. H. G. to EDWARDS at Columbus

Edward's Service guarantees the shipper all that he expects.

PACKING STORAGE  
LOCAL and LONG DISTANCE  
MOVING

The Edwards Transfer & Storage Company  
Columbus, Ohio

Members NFWA—OACH—OWO—NTMTOA

## COLUMBUS, OHIO

Safety First

## The Fireproof Warehouse & Storage Company

1018-30 North High Street  
Columbus, Ohio

## TRANSFERRING — STORING — PACKING

We have one of the finest warehouse plants in the state; being steam heated throughout, equipped with a sprinkler system, absolutely fireproof. The cheapest rate of insurance. Located handy to all railroads, we are able to deliver the best service obtainable anywhere. We solicit your shipments to our city and assure you we will reciprocate. P. A. DOLLE, General Manager.

## Motor Truck Service

Vaults for Valuables

Private Rooms

## COLUMBUS, OHIO.

## The Merchandise Storage Company

Columbus, Ohio

General Storage &amp; Distribution

SERVICE THAT WILL SATISFY

## COLUMBUS, OHIO

**If You Knew** How much of the money you spend in advertising and sales campaigns was a total loss because your competitor gets the business by making immediate delivery—

You would find it pays to carry a spot stock with us in Columbus!

General Storage and Merchandise Distributors

THE OHIO WAREHOUSE CO.

544-560 Park St. South

Columbus, Ohio

## COLUMBUS, OHIO

## The Security Storage & Power Co.

COLUMBUS, OHIO

Lowest Insurance Rate in Columbus, 21c.  
General Storage Distribution

## DAYTON, OHIO

## THE UNION STORAGE CO.

U. S. BONDED

BAINBRIDGE, BACON &amp; STATE STREETS

MERCHANDISE STORAGE TRANSFER DISTRIBUTION

## LAKEWOOD, OHIO

"Across the Hall—Across the Continent"

Consign Cleveland—Lakewood Shipments to

THE

Lakewood Fireproof Storage Company

14401 Detroit Avenue

Lakewood-Cleveland, Ohio

Only Warehouse in Lakewood

**MANSFIELD, OHIO**

**The W. Lee Cotter Warehouse Company**  
40 W. Third St.  
*Household Goods and Merchandise Storage*  
*Fireproof Warehouse*      *Motor Freight Service*  
Member N. F. W. A., A. W. A.

**MARION, OHIO**

**MERCHANTS  
Transfer Company**

160 McWILLIAMS COURT, MARION, OHIO

Heavy Haulage Our Specialty. General Distribution and Storage of Merchandise. Motor Vans for Local and Long Distance Moving. Storage for Household Goods, Automobiles and Machinery. Packing and Shipping. Private Siding New York Central Lines.

**MEMBER N. F. W. A.**

**MARION, OHIO**

**PADDOCK  
Transfer & Storage Co.**

ESTABLISHED 1889

Our central location, complete equipment and our earnest desire to have only satisfied customers insures excellent service in:—

**STORAGE** For household goods  
and merchandise.

**MERCHANDISE  
DISTRIBUTION**

**SHIPPING & PACKING**

**MOVING**

(Locally and long distance)

**SPRINGFIELD, OHIO**

Member A. W. A., O. W. A.  
**HODGE STORAGE & CARTAGE CO.**  
Merchandise Storage and Distribution  
Pool Cars Solicited

Private Siding on Pennsylvania Railroad  
Free Switching from Other Lines Entering Springfield

**SPRINGFIELD, OHIO**

**Springfield, Ohio Shipments!**

Bill Through

**WAGNER**

**Fireproof Storage and Truck Co.**

Siding on Pennsylvania Lines. Free Switching Tariff. Complete facilities for Pool Car Shipments.  
Light and Heavy Motor Truck Service for City and Inter-City Transportation.

A warehouse service that embodies every modern facility for the storage and distribution of merchandise.

**Door to Door Delivery in Dayton—Springfield—Columbus**  
**Daily Freight Service at Freight Rates**

**TOLEDO, OHIO**

**The W. Lee Cotter Warehouse Company**  
201 Cherry St.

*Merchandise Storage and Distribution*  
*Excellent Service*  
Member A. W. A.

**TOLEDO, OHIO**



**"SHIP TO TOLEDO AND  
CONSIGN TO DEPENTHAL"**

We are specialists in furniture packing, local and long distance furniture hauling.

Storage for general merchandise and household goods.

Connections with all railroads entering the city.

Private siding on the B. & O.

Member of National Furniture Warehousemen's Association.

**DEPENTHAL TRUCK & STORAGE CO.**  
Main Office, 108 Summit Street, Toledo, Ohio

**TOLEDO, OHIO**

**THE GENERAL  
FIREPROOF STORAGE CO.**  
651-655 STATE STREET

*Household Goods Exclusively*

Member—The National Furniture Warehousemen's Ass'n

**TOLEDO, OHIO**

**HOUSEHOLD GOODS EXCLUSIVELY**  
Established 1894

**The H. C. Lee & Sons Co.**  
TOLEDO'S LEADING MOVERS  
**STORAGE**

MEMBER N. F. W. A. Toledo, Ohio

**TOLEDO, OHIO**

**Let "RATHBUN" Do It**  
**THE RATHBUN CARTAGE CO.**

195 and 197 So. St. Clair St.

Equipment Up to 20 Tons Capacity

*Storage of Household Goods, Pianos and  
Merchandise*

Members Nat'l F. W. Assn.

## TOLEDO, OHIO

**Yount's Cartage & Storage Co.**

615 Monroe St. Toledo, Ohio  
Moving, Packing, Crating and Storage.  
Pool Car Distribution.  
Send Us Your Next Shipment.  
We Believe in Reciprocity.  
Established 1890.



## YOUNGSTOWN, OHIO

**THE WM. HERBERT & SON CO**

EST. 1887

CRATING — PACKING — MOVING

**STORAGE**  
YOUNGSTOWN, OHIO

## CHICKASHA, OKLA.

**Rock Island Transfer & Storage Co.**

Merchandise Pool Cars Distributed

Logical Distributing Point of the South West Territory

Chickasha, Okla.

## MUSKOGEE, OKLA.

**Muskogee Transfer & Storage Co.**

2—Fireproof Warehouses

Merchandise and Household Goods

Stored—Pool Cars Distributed

Railroad Siding.

## OKMULGEE, OKLA.

**HAL GRIFFIN, THE TRANSFER MAN**

Hauling, Storing and Shipping

Distribution Service

West Third between Frisco and Okmulgee Northern R. R.

## TULSA, OKLA.

**Joe Hodges Fireproof Warehouse**

Moving — Packing — Storage

Mixed Cars a Specialty. Large docks for sorting. We solicit your shipments to our city and assure you we will reciprocate and guarantee prompt remittance. Located on Railroad.  
Best Service Obtainable.

## TULSA, OKLA.

**Tulsa Storage & Transfer Co.**

Fireproof Warehouse

Pooled car distributors—private siding "Frisco" merchandise and H. H. Goods—6 railroads into Tulsa—A. T. & S. F., Frisco, M. V., M. K. & T., O. U. R. & S. S.

## PORTLAND, ORE.

16th &amp; Sandy Blvd., Portland, Ore.

**BEKINS**  
VAN & STORAGE CO.

MOVING SHIPPING PACKING STORING

Seattle, Wash.  
Tacoma, Wash.  
Vancouver, B. C.  
Goux City, Iowa  
Omaha, Neb.  
Los Angeles, Cal.  
San Francisco, Cal.  
Oakland, Cal.  
Fresno, Cal.  
Hollywood, Cal.  
Sacramento, Cal.

## PORTLAND, ORE.

**Oregon Transfer Company**

Established in 1848

474 Glisan Street

Portland, Oregon

U. S. Bonded and Public Warehouses

Storage, Distribution and Forwarding  
Specialists

Largest Warehouse and Transfer Organization in Pacific Northwest. We own our buildings and equipment.

## ALLENTOWN, PA.

**Diehl Storage Warehouse Co.**

Established 1868

Investment \$200,000.00

Local and Long Distance Hauling  
PACKING - CRATING - SHIPPING

COMMERCIAL

HOUSEHOLD

AUTOMOBILE

**STORAGE**

400 Rooms Under Lock

226 - 230 N. 8th Street

ALLENTOWN, PA.

Bell 2653

## ALLENTOWN, PA.

**C. A. Dorney Storage Warehouse Co.**

Warehouse—Race &amp; Linden Sts. Office—612 Hamilton St.

General Storage

Household Goods

Distribution

Merchandise

Forwarding

Direct switch connection Lehigh Valley R. R.  
Automatic Sprinkler System

## BETHLEHEM, PA.

## ALLENTOWN, PA.

**F. G. LAZARUS****20th Century Storage**

Moving, Storing, Packing, Crating, Shipping  
of Household Goods and Merchandise

Direct R. R. Siding Lehigh Valley.

## BETHLEHEM, PA.

**L. and N. E. Terminal Warehouse Co.**

SPACE FOR ALL KINDS OF GOODS

COLD STORAGE—MERCHANDISE—HOUSEHOLD GOODS

CENTRALLY LOCATED TO SERVE

ALLENTOWN—BETHLEHEM—EASTON

AND ADJACENT TERRITORY

(P. O. Bethlehem)

## CHESTER, PA.

**Headley's**  
**Express & Storage Co., Inc.**

General Storage

Merchandise and Household Goods

Moving, Packing and Shipping

## ERIE, PA.

**Erie Warehouse Company**

MERCHANDISE

STORAGE

DISTRIBUTION

"A complete and efficient service"

PRIVATE TRACKAGE

MOTOR TRUCK FLEET



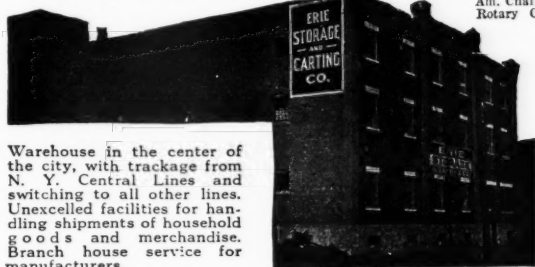
ERIE, PA.

ERIE

STORAGE & CARTING COMPANY

1502 Sassafras Street

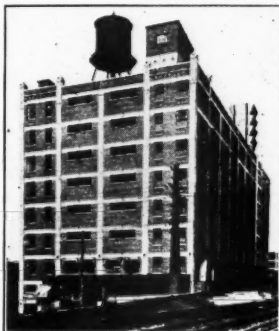
Members of A. W. A.,  
I.F.W.A., N.Y.F.W.A.,  
Am. Chain &  
Rotary Club



Warehouse in the center of the city, with trackage from N. Y. Central Lines and switching to all other lines. Unexcelled facilities for handling shipments of household goods and merchandise. Branch house service for manufacturers.

ERIE, PA.

UNION STORAGE CO. of ERIE  
FIFTEENTH AND GERMAN STS., ERIE, PA.



General Storage  
Cold Storage  
Distributing  
Space for Leasing  
Private Offices

Private Tracks on Main  
Line of New York  
Central Railroad

Insurance Rate on  
Contents 17 cts. per \$100.00  
per Year

Only Fireproof Ware-  
house in Erie

G. E. DENMARK  
Plant Manager

JOHNSTOWN, PA.



I. D. REPLOGLE STORAGE CO.  
438 HORNER STREET

Household Goods and  
Merchandise Storage

Pool Car Distribution. Private Siding B. & O. Free  
Switching for Carload Shipments When B. & O.  
Delivery Is Specified. L. C. L. Shipments  
B. & O. or P. R. R. Stations. Complete  
Warehouse Service

Members Penn. F.W.A. and N.F.W.A.

HARRISBURG, PA.

MONTGOMERY & CO.  
STORAGE WAREHOUSES

Merchandise Storage—Transferring—Forwarding

Direct Track Facilities

Pool Car Distribution

Members A.W.A. and American Chain of Warehouses

LANCASTER, PA.

S. S. BERTZ & CO., 226 West Lemon Street  
STORAGE WAREHOUSE

General Merchandise Distribution

Pool Car Shipments

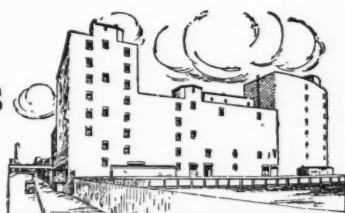
HOUSEHOLD GOODS STORAGE

Local and Long Distance Hauling—Direct Railroad Siding—Both  
Pennsylvania R. R. and Philadelphia & Reading  
CORRESPONDENCE SOLICITED

HARRISBURG, PA.

POOL CARS

Efficiently Handled



Merchandise and Household Goods Storage

HARRISBURG STORAGE CO.  
P. R. R. Sidings. HARRISBURG, PA.

LANCASTER, PA.

Keystone Express & Storage Co.

STORAGE—DISTRIBUTORS—FORWARDERS

Merchandise and Household Goods

MANUFACTURERS' DISTRIBUTORS

MOTOR SERVICE

Siding on P. R. R. and P. & R.

LANCASTER, PA.

Lancaster Storage Co.

Lancaster, Pa.

Merchandise Storage, Household Goods, Trans-  
ferring, Forwarding

Manufacturer's Distributors, Carload Distribution  
Local and Long Distance Moving  
Railroad Sidings

The Men Who Distribute

Konstructo Toys

Read DISTRIBUTION & WAREHOUSING  
and consult the Shippers' Index

## NEW CASTLE, PA.

S. C. MOORE, *Proprietor***Keystone Delivery Transfer & Storage**  
Packing, Crating, Storage and Shipping  
of Household GoodsMerchandise distribution. Pool car shipments. Motor trucks for light and heavy hauling and long distance moving.  
*Members N. F. W. A.      Members Penna. Whse. Assoc.*

## OIL CITY, PA.

**CARNAHAN**  
Transfer and StorageThe most reliable transfer in Venango County. Fireproof warehouse. Private rooms for furniture and pianos. General hauling. Overland hauling. Piano moving. Furniture packing a specialty.  
Forwarding agents. *Members N. F. W. A.*

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**ATLAS STORAGE  
WAREHOUSE  
COMPANY**

Market and 37th Sts.

Walter E. Sweeting, *President*  
Chas. G. Wightman, *Vice-President*  
George A. Emig, *Secretary-Treasurer*  
*Members: N.F.W.A., Pa. F.W.A., C.S. & T.A.*

## PHILADELPHIA, PA.

HARVEY J. LUTZ

MILTON A. HILDENBRAND

**HILDENBRAND BROS.**  
STORAGE, PACKING, MOVING  
Broad and Cumberland Streets, Philadelphia, Pa.  
*Large fleet of Packard motor vans.*

## PHILADELPHIA, PA.

**MILLER NORTH BROAD  
STORAGE COMPANY**

MOVING, STORAGE, PACKING, SHIPPING

Four large convenient Warehouses. Fleet of thirty large and small motor trucks. Storage space for household goods, merchandise and automobiles. Private Siding Penna. R. R. (Angora Station). Distribution of Pool Car Shipments.

Main Office: BROAD ABOVE LEHIGH AVENUE  
PHILADELPHIA, PENNSYLVANIA*Members: N. F. W. A. and A. W. A.*

## PHILADELPHIA, PA.

Wm. Rommel, Jr., *Pres. and Genl. Manager***South Jersey Warehouse Company**  
1300 Pine St., Camden, N. J.

Warehouse No. 1 1300 Pine Street

Warehouse No. 2 West Jersey R. R. and Jackson St.

Warehouse No. 3 1300 Pine Street

General Merchandise Only      Warehouse Receipts Issued  
Direct Penn. R. R. Siding      Pool Car Distribution  
Motor truck service for Philadelphia and South Jersey deliveries

## PHILADELPHIA, PA.

9 Warehouses      27 Acres of Floor Space      Sea and Rail  
Trackage Facilities for 48 Cars      Reading R. R.      Penn. R. R.

LOCATION—On river front—Heart of jobbing district—Adjacent to navigation lines—Surrounding streets, wide and well paved, eliminate vehicular congestion.

EQUIPMENT—Thoroughly modern—Low insurance—High speed elevators—Ample delivery platforms—Fleet of motor trucks—Completely equipped pool car department.

FACILITIES—Direct track connection with Penn. R. R. and Reading R. R. permitting daily ferry or trap car service—No cartage expense on L. C. L. shipments. PERSONNEL—Trained to intelligently handle all merchandise.

**TERMINAL WAREHOUSE COMPANY**  
Delaware Ave. and Fairmount*Members—A. W. A., Distribution Service, Inc., N. F. W. A., Pa. F. W. A.*REPRESENTED BY  
DISTRIBUTION SERVICE, INC.100 BROAD ST., NEW YORK CITY  
Phone B.G. 8100427 W. WIS ST., CHICAGO  
Phone Sup. 7180624 THIRD ST., SAN FRANCISCO  
Phone Sutter 3461*An Association of Good Warehouses Located at Strategic Distribution Centers*

PHILADELPHIA, PA.

# Philadelphia LOCAL BUSINESS

1004-1026 Spring Garden Street

Manufacturing Distributors

Philadelphia, Germantown, Chestnut Hill,  
Camden, N. J., Frankford

PHILADELPHIA, PA.

Household Effects



Fireproof Warehouse

"A Service as Good as Its Reputation"

20th CENTURY STORAGE WAREHOUSE CO.

3120 MARKET STREET

(Member—N. F. W. A. and P. F. W. A.)

PITTSBURGH, PA.

Where  
Efficiency  
Is the Rule

We know how much promptness is appreciated in warehousing.

Therefore, we observe promptness in executing every obligation placed upon us by our customers.

Correspondence, settlement of accounts, reports, etc., are all handled with a speed that saves time for the client.

If you want Service try HAUGH & KEENAN.

Ship via Pennsylvania to East Liberty Station (Pittsburgh, Pa.).

Established 1889

HAUGH & KEENAN  
STORAGE & TRANSFER CO.  
CENTRE AND EUCLID AVENUES



PITTSBURGH, PA.

IN  
PITTSBURGH  
IT'S  
**BLANCK'S**

TRANSFER & STORAGE CO.

SINCE 1880

MOVING—PACKING—STORAGE  
BAGGAGE AND FREIGHT DELIVERY  
FIREPROOF WAREHOUSE

REAL SERVICE

PITTSBURGH, PA.

## MURDOCH STORAGE & TRANSFER COMPANY

General Office and Warehouses

546 Neville Street, Pittsburgh, Pa.

Branch Warehouse, Wilksburg, Pa.

PITTSBURGH, PA.

Established 1904

## PENNSYLVANIA Transfer & Storage Co.

MERCHANDISE

WAREHOUSING AND  
DISTRIBUTION

Our Own Fleet of Motor Trucks for City  
and Suburban Deliveries

Negotiable Warehouse Receipts Issued  
Reasonable Rates

Stocks Carried, Records and Reports  
made to Out of Town Concerns

**POOL CAR DISTRIBUTORS**

Our Facilities for Receiving and Distributing  
Freight are unsurpassed

Office and Warehouses

Twenty-Fifth St. and A. V. R. R.  
PITTSBURGH, PA.

READING, PA.

## Columbian Warehouse Company

Storage, New Merchandise Exclusively.

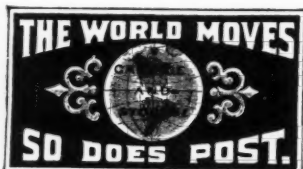
Modern Building, Lowest Insurance Rates.

S. W. Cor. 5th & Laurel Sts.



## SCRANTON, PA.

Members N. F. W. A.—P. F. W. A.

**R. F. POST**Motor  
TrucksHousehold  
GoodsMerchandise  
StoragePool Car  
Distribution**DRAYMAN AND STORAGE WAREHOUSE**  
Lackawanna R.R. Siding Direct

## SCRANTON, PA.

Established 1894.  
"He Profits Most Who Serves Best" (Rotary)**The Quackenbush Warehouse Co.**

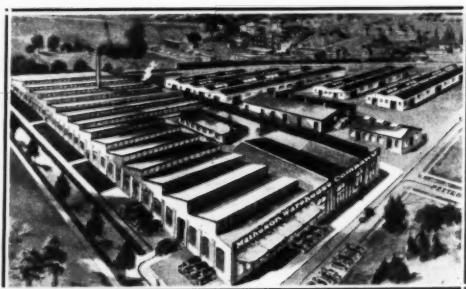
Incorporated

Shipping, R.R. Siding, Manufacturers' Distributors.  
Correspondence Solicited

Members A. W. A. and A. C. W.

Storage in transit privilege accorded.

## WILKES-BARRE, PA.

On Lehigh Valley R. R.  
Private Siding, 15 Car Capacity.  
Over Four Acres Floor Space.  
All Ground Floor.  
Member P. F. W. A.Centrally located in populous area.  
300,000 within 10 miles.  
1,400,000 within 50 miles.**Matheson Warehouse Co.**

## WILKES-BARRE, PA.

"Same Day Service"

**MERCHANTS WAREHOUSING COMPANY**Merchandise Storage and Pool cars checked.  
Central location and direct siding for 10 cars on L. V. and C. R. R.  
of N. J. sidings.  
Manufacturers' Distributors with facilities to handle large consignments.

Offices: 150-156 E. Northampton Street

## WILKES-BARRE, PA.

**WILKES-BARRE WAREHOUSING CO.**

General Storage and Distribution

Prompt and Efficient Service  
Milling-in-Transit and Pool Cars

19-35 New Bennett St.

Wilkes-Barre, Pa.

## WILLIAMSPORT, PA.

**The Williamsport Storage Co., Inc.**

GENERAL MERCHANDISE STORAGE

Pool Car Distribution and Forwarding

Prompt and Efficient Service

Members A. W. A. and P. W. A.  
Correspondence Solicited.

## PROVIDENCE, R. I.

JAMES LE BOY FOSTER, Pres.

WALDEN WYMAN, Mgr.

Rhode Island's Only Fireproof Warehouse

**BROADWAY STORAGE CO.**

Packing and Merchandise Distributors

Merrill &amp; Federal Streets,

Providence, R. I.

## PROVIDENCE, R. I.

**CADY MOVING & STORAGE CO.**

STORAGE WAREHOUSES

Household Furniture and Pianos

Packing, Crating and Shipping.

62 to 70 Dudley Street.

## PROVIDENCE, R. I.

**JONES WHSE., INC.**

Fireproof Storage

Experts in Handling Household Goods

Office, 59 Central St., Providence, R. I.

Storage, Packing, Moving, Shipping

## PROVIDENCE, R. I.

**Terminal Warehouse Company of R. I., Inc.**Storage Cotton and General Merchandise, Pool Car  
Distribution. Lowest Insurance.Trackage facilities 50 cars. Dockage facilities on  
deep water.

Shipping directions South Providence, R. I.

## CHARLESTON, S. C.

**Charleston Warehouse and Forwarding Co.**Merchandise Storage and  
Distribution of Pool CarsModern Concrete Warehouse. 100,000 Square Feet of Storage Space  
Private Tracks Connecting with All Railroad and Steamship Lines  
Motor Truck Service.

Members of the American Chain of Warehouses, Inc.

## SPARTANBURG, S. C.

P. A. CAREY, Pres.-Treas.

**Carey Transfer & Storage Co., Inc.**Storage, Packing, Shipping of  
Household Goods

and

General Merchandise—Pool Car Shipments

Distributed Correspondence Solicited.  
Members: So. W. A.

**ABERDEEN, S. D.**

*Where the West Was*

**ABERDEEN STORAGE COMPANY**

Storage and Distribution of Merchandise and  
Household Goods

Pool Cars Promptly Handled

C. M. & St. P. Trackage Trucks and Teams

**SIoux FALLS, S. D.**

**STRAHON TRANSFER  
& STORAGE CO.**

General Warehousing  
Distribution Private Trackage  
Pool Cars a Specialty  
Bonded Warehouse  
35,000 sq. ft.  
Motor Truck and Team Service



**CHATTANOOGA, TENN.**

**The Hub of the South  
for**

**Break Bulk Shipments**

**CHATTANOOGA TRANSFER  
& STORAGE CO.**

**CHATTANOOGA, TENN.**

**CHATTANOOGA**

**Warehouse and Cold Storage Company**  
Chattanooga, Tennessee

MEMBERS: A. W. A. and AMERICAN CHAIN

Cold and General Storage

GENERAL MERCHANDISE AND HOUSEHOLD  
GOODS PACKING AND SHIPPING

Special Attention Given to Pool Car Distribution.

**CHATTANOOGA, TENN.**

**CRABTREE**

**TRANSFER & STORAGE COMPANY, Inc.**

Distributors and forwarders of pool cars

**MOVING, PACKING, STORAGE**

Sprinkler system warehouse. Lowest insurance rates.

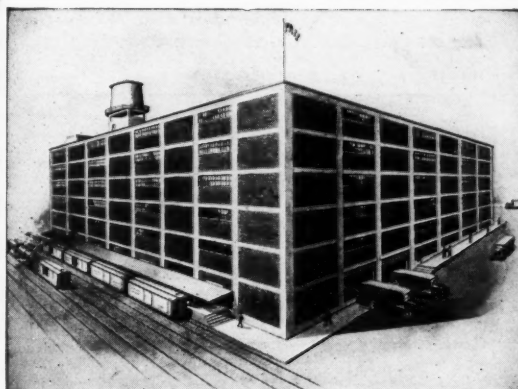
The Men Who Distribute

**Ritter Dental Supplies**

Read DISTRIBUTION & WAREHOUSING  
and consult the Shippers' Index

**KNOXVILLE, TENN.**

D. R. BENEDICT, Manager



**Knoxville Fireproof Storage Company**  
201-211 Randolph St.  
Knoxville, Tennessee

**Only Fireproof Warehouse in Knoxville**

135,000 square feet on  
Southern Railway tracks.  
Equipped with Automatic Sprinkler.

Insurance at 12c. per \$100.00 Household goods shipments  
per annum. solicited. Prompt remittances  
Pool Cars distributed. made.

**MEMBERS**

American Warehousemen's Ass'n  
National Furniture Warehousemen's Ass'n

**PROMPT AND EFFICIENT SERVICE**

**MEMPHIS, TENN.**

J. M. Walker, Pres.

J. L. Butler, Mgr.



**STORAGE &  
TRANSFER Co.**

INCORPORATED  
Member  
N. F. W. A.  
So. W. A.

Operating  
WAREHOUSES  
Memphis  
New Orleans  
Louisville  
Little Rock

FIREPROOF STORAGE

Household Goods

161 Jefferson Street

**MEMPHIS, TENN.**

**Patterson Transfer Company**

Established 1856. Sprinkler System.

Lowest Insurance Rate in the City.

Merchandise Storage and Distribution.

Pool Cars Distributed.

**MEMPHIS, TENN.**

Pres. J. H. POSTON Vice-Pres. S. M. POSTON  
Secy. and Treas. W. H. DEARING

**JOHN H. POSTON  
STORAGE WAREHOUSES**

INCORPORATED

**671 to 679 South Main St., on Illinois Central Railroad  
Tracks**

**CAPACITY 1000 CARS**

Free Delivery from All Railroads on Car Lots

Insurance Rate 25-100 of One Per Cent or \$2.50 Per  
\$1000.00 Per Annum.

No Charge for Switching To All Railroads on Car  
Lots for Competitive Points and Illinois Central Rail-  
road Local Stations.

**DISTRIBUTION A SPECIALTY  
MEMPHIS, TENN.**

MEMPHIS, TENN.

**MEMPHIS and TRI-STATES TENNESSEE SERVICE**  
Distributing Point for Tennessee, Texas, Oklahoma, Mississippi,  
Louisiana, Alabama, Arkansas  
*Carload Lots and Pool Cars Our Specialty*  
67000 Square Feet Floor Space  
**Tennessee Terminal Warehouses, Inc.**  
613 to 645 So. Front St., Memphis, Tenn.  
Established 1921 P. O. Box 2056 Skelton Driver, Manager

NASHVILLE, TENN.



# BOND

Merchandise  
and  
Household  
Goods  
Warehouses

Reliable Service Up-to-Date Facilities

**E. M. Bond Fireproof Storage Co.**  
1609 Broadway 821 Ewing Ave.

Members of American Warehousemen's Association, National  
Furniture Warehousemen's Association, Southern Warehouse-  
men's Association and American Chain of Warehouses.

NASHVILLE, TENN.

**Nashville Warehouse & Elevator Corp.**  
*General Storage and Distribution*

Warehouse, 152,000 Sq. Ft. Grain Storage and Elevator  
Automatic Sprinkler Cap. 1,000,000 Bushels  
Licensed and Bonded

NASHVILLE, TENN.

**The PRICE-BASS CO.**

Office: 216—10th Ave., No.

Warehouse: 194-204 Hermitage Ave.

Over 100,000 Sq. Ft. on Tennessee Central Railway  
Tracks.

Equipped with Automatic Sprinkler.

Lowest Insurance Rate on General Storage in Nash-  
ville.

Free Switching.

Distribution of Warehouse Stock and Pool Cars.

BEAUMONT, TEXAS

Private Sidings.

Lowest

Insurance Rates.

Local and Interurban

Truck Service.



FORT WORTH, TEXAS

# In Fort Worth It's Binyon-O'Keefe

With three warehouses having a total of 250,000 square  
feet of floor space; with our private side and free  
switching to Fort Worth's eleven Trunk Line Rail-  
roads—in Fort Worth, Binyon-O'Keefe is best pre-  
pared to serve you.



**BINYON-O'KEEFE**  
*Fireproof Storage Co.*  
Fort Worth

Associated with Distribution Service, Inc.



GALVESTON, TEXAS

**Universal Terminal Warehouse Company**

Fire-proof storage—Sprinklered Warehouses

Galveston, Texas

Houston, Texas

New York Office:  
40 Rector Street

GALVESTON, TEXAS

**The WILEY & NICHOLLS CO.**

GALVESTON, TEXAS

**TRANSFER AND FIRE-PROOF  
WAREHOUSES**

Pool Car Distributors

Forwarders

HARLINGEN, TEXAS

**JONES TRANSFER & STORAGE CO.**

Harlingen, Texas

Serves the Entire Rio Grande Valley

PROMPT

CAREFUL

RESPONSIBLE

DISTRIBUTING  
STORING  
MOVING  
CRATING  
SHIPPING

HOUSTON, TEXAS

# A B C Storage and Moving Co., Inc.

IDEAL FOR {Distributing of  
Merchandise and  
Household Goods.

Reasonable

Reliable

Responsible

Houston, Texas

Edw. Thos. Keough, Pres  
Mgr.

EL PASO, TEXAS

**R. L. Daniel Storage Co.**

Box 487, 1706 Texas, 2813 Durazno Sts.

Our hobby is the crating, packing, shipping and storing of  
household goods. Consign your goods to us for proper attention.  
Member, National Furniture Warehousemen's Assn.

HOUSTON, TEXAS

**Universal Terminal Warehouse Company**

Fireproof storage—Sprinklered Warehouses

Houston, Texas

Galveston, Texas

New York Office: 40 Rector Street



HOUSTON, TEXAS

ONE OF SOUTHWEST'S LARGEST MODERN  
FIREPROOF BONDED WAREHOUSES

*Facilities for handling all kinds of Mer-  
chandise with accuracy and promptness.*

**NATIONAL** Warehouse and  
Distributing Co.

KOPPEL AND WASCHER, Propr's  
P. O. Box 1754 Houston, Tex.

Warehouses contain 72,500 sq. ft. space. Brick con-  
struction. Sprinkler system assures you a lower rate  
of insurance.

HOUSTON, TEXAS

IN HOUSTON  
**WESTHEIMERS**  
Inc.

Forty-two Years of Honest Service

SERVICE  
EXTENDED TO EVERY BRANCH OF  
THE INDUSTRY

Benj. S. Hurwitz  
President

Members  
A. W. A., N. F. W. A.

Distribution Service, Inc.

SAN ANTONIO, TEXAS

**MERCHANTS TRANSFER CO.**

Bankers of Merchandise  
Warehousing and Distribution  
Merchandise—Household Goods—New Furniture  
Branch House Facilities—Bonded  
Private Sidings—Mo. Pac. & Sou. Pac. Railways

SAN ANTONIO, TEXAS

**MUEGGE-JENULL WAREHOUSE CO.**

Distributing Storage Forwarding

Give us a chance to demonstrate our service.

Reference Any Bank in San Antonio.

Bonded, Fireproof, Reliable, Dependable Service.

SAN ANTONIO, TEXAS

**SCOBAY**  
FIREPROOF  
**STORAGE**

SAN ANTONIO, TEXAS

General Warehousing and Distribution

CAPACITY 1,250,000 CU. FT.

THE HOUSE of SECURITY

Member four leading associations

Write for freight tariff to all  
points in San Antonio Territory



TEXARKANA, TEXAS

**HUNTER TRANSFER CO.**

TEXARKANA, ARK.

Established 1882  
DISTRIBUTOR OF

POOL CARS  
TRUCKING

STORAGE  
MOVING

TYLER, TEXAS

**Tyler Warehouse and Storage Company**

Bonded under the Laws of Texas

General Storage and Distribution from the Center of East  
Texas. Specializing in Pool Cars Merchandise.

WICHITA FALLS, TEXAS

**Elkin Transfer & Storage Co.**

Wichita Falls, Texas

Located in the heart of the oil industry. Logical distributing  
center for North Texas. Trackage warehouse for merchandise and  
household goods; free switching service.

We specialize in pool car distribution  
MEMBERS Texas W. & T. Ass'n  
Kewanee International

SALT LAKE CITY, UTAH

**Merchandise Storage and Distribution**

Over 1,000,000 Cubic Feet Re-enforced Concrete,  
Sprinklered Space

Insurance Rate Only 18 Cents

**Jennings-Cornwall Warehouse Co.**

ALEXANDRIA, VIRGINIA

Alexandria, Virginia

**"THE KEY TO DIXIE"**

Unexcelled locations for STORAGE and DISTRIBUTING  
WAREHOUSES—Transportation Center—Rail and Water  
Correspondence and Inspection Solicited

Address Secretary, Chamber of Commerce

RICHMOND, VA.

**Virginia Bonded Warehouse Corporation**

1707 East Cary Street

Distribution and Forwarding of General Merchandise Only  
Largest Warehouses in South Southern R. R. Siding  
175,000 sq. ft. Insurance Rate 25c. per \$100 per year

Members American Warehousemen's Association

OLYMPIA, WASH.

**CAPITAL CITY TRANSFER CO.**

508 Columbia Street

Moving—Crating—Shipping  
Fire-Proof Storage  
Pool Cars Handled

Olympia

Washington

SEATTLE, WASH.

**A. B. C. STORAGE CO.**

WAREHOUSING AND DRAYING

We Make a Specialty of Storage and Pool Car Distribution  
for Agents, Brokers and General Merchandise Houses.

Warehouse Trackage Connecting All R.R.

304 R.R. Ave. South

Seattle, Wash.

## SEATTLE, WASH.

12th &amp; Madison Sts., Seattle, Wash.

**BEKINS**  
VAN & STORAGE CO.

MOVING SHIPPING PACKING STORING

Tacoma, Wash.  
Portland, Ore.  
Vancouver, B. C.  
Sioux City, Iowa  
Omaha, Nebr.  
Los Angeles, Cal.  
San Francisco, Cal.  
Oakland, Cal.  
Fresno, Cal.  
Hollywood, Cal.  
Sacramento, Cal.

## SEATTLE, WASH.

Central Van and Storage Co.

Seattle, Wash.

Moving  
Packing Shipping  
Fireproof Storage  
Private or Open

COPYRIGHT 1925, CENTRAL VAN AND STORAGE COMPANY

## SEATTLE, WASH.

**EYRES STORAGE and  
DISTRIBUTING CO.**Established 1889  
Incorporated 1904  
Free & Bonded**Warehouses**  
Seattle, Wash.GENERAL MERCHANDISE STORAGE  
MACHINERY STORAGE  
HOUSEHOLD GOODS STORAGEPOOL CAR DISTRIBUTIONS  
OPERATING 18 TEAMS, 42 AUTOS  
SERVICE OUR MOTTO

## SEATTLE, WASH.

**GLOBE TRANSFER & STORAGE  
COMPANY**

Incorporated 1909

**CONCRETE FIREPROOF WAREHOUSE**Lowest Insurance Rate  
Trackage—Six Unloading Doors  
440-450 Holgate Street

SEATTLE

WASHINGTON

## SEATTLE, WASH.

**UNITED WAREHOUSE CO.  
SEATTLE, WASH.**U. S. Customs Bonded and General Storage  
Distribution a Specialty

## TACOMA, WASH.

615 South Tacoma Ave., Tacoma, Wash.

**BEKINS**  
VAN & STORAGE CO.

MOVING SHIPPING PACKING STORING

Seattle, Wash.  
Portland, Ore.  
Vancouver, B. C.  
Sioux City, Iowa  
Omaha, Nebr.  
Los Angeles, Cal.  
San Francisco, Cal.  
Oakland, Cal.  
Fresno, Cal.  
Hollywood, Cal.  
Sacramento, Cal.The Men Who Distribute  
**Simmons Beds**Read DISTRIBUTION & WAREHOUSING  
and consult the Shippers' Index

## TACOMA, WASH.

**WE OWN BOTH WAREHOUSES**

Established 22 years in Tacoma—and know how to handle your requirements

Storage (bonded and free) Merchandise and H. H. Goods  
Moving and Packing by Experts C. L. & L. C. L. Distribution  
Collections Remitted Promptly We Solicit Your Business  
CORNER PACIFIC AVE. AND 19th.

## TACOMA, WASH.

**Pacific**  
Storage & Transfer Co.Warehousemen  
Merchandise and Furniture  
Distributors and Forwarders**SERVICE**  
Speed—Accuracy—  
Satisfaction

Ship Your Pool Cars in Our Care



## HUNTINGTON, WEST VA.

**INDEPENDENT TRANS. & STORAGE CO.**

215—9th Street

Distributors of Merchandise, Pool Cars, Etc.

Equipped for Handling Heavy Machinery of All Kinds  
Household Goods Packed and Shipped

## HUNTINGTON, W. VA.

**IT'S JUST WORK**

But what a pleasure we get out of it, when we have completed that pool car or shipped that order your salesman fought for, to know that we have been a cog in the wheel that kept your plant operating, makes us feel that we are worthwhile. Don't you want a distributor in this fertile field who feels like that in your organization?

**MAIER SALES AND STORAGE CO.**

1639-41-43-45 Seventh Ave.

Huntington

West Virginia

## HUNTINGTON, W. VA.

When You Ship to Huntington  
**Ship to PRINDLE**Two modern warehouses with private sidings on the B. & O. and C. & O.  
Dist. Mdse. and Hbg. pool cars. City and interurban delivery of Mdse. and Hbg. Prindle Service is worth while—try it.**M. B. PRINDLE & CO.**  
911 Second Ave.

WHEELING, W. VA.

Established 1891

# J. E. MILLER TRANSFER & STORAGE CO. 6-12 TWELFTH ST.

SERVING  
Elm Grove  
Benwood  
Moundsville  
Warwood  
Bridgeport  
Martin's Ferry  
Bellaire



Packing  
Storage  
Heavy  
Hauling

LA CROSSE, WIS.

## La Crosse Terminal Warehouse Company

Storage and Forwarding  
Household Goods and Merchandise  
Trackage Connection with All Railroads

A Warehouse modern equipped in every respect rendering  
service of the better kind—always up-to-the-minute.

Phone 492 La Crosse, Wis.

M. A. Smith, Mgr.

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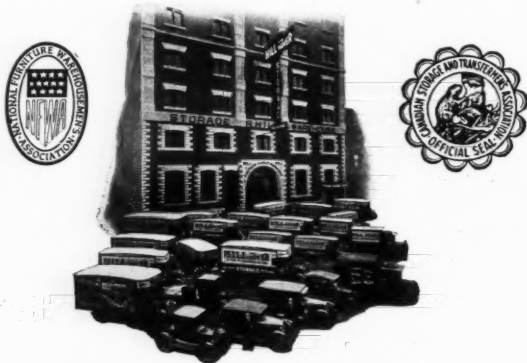
You—Warehouseman, may be all right  
A gentleman—and a' that  
But if your *men* are not *polite*  
You'll \*'bear the gree' for a' that—  
For a' that and a' that,  
You'll do your best—and a' that  
But some there be—put to the test  
Will wink at that—for a' that.

"Pop"

\*Suffer the consequences



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**DRISCOLL'S  
Transportation  
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2068 Dundas St., WestYe can't make any progress just by stayin'  
where ye are:Ye can't make speed by settin' in a one-horse  
car.Don't think because yer movin' that yer sure-  
ly "gettin'" there;Unless ye get PUBLICITY—Ye can't get  
*Anywhere!***"Pop."**

# THE BUYERS' GUIDE for the WAREHOUSE INDUSTRY

In this department appears the names and locations of the manufacturers making equipment, supplies, etc., used by the Merchandise and Furniture Warehousemen.

These columns contain the names of most all manufacturers who make the items here listed, which fact adds great value to the section. We urge all warehousemen to use this buyers' guide in making their purchases.

THOSE WHOSE ADVERTISEMENTS APPEAR in DISTRIBUTION and WAREHOUSING are conversant with the industry and its requirements. In most cases they are already doing a large volume of business with the industry and the fact that their advertisement appears in these columns indicates that DISTRIBUTION and WAREHOUSING considers their products reliable and as advertised.

We urge you to give the advertisers your first consideration and patronage.

## BASKETS, MOVING

Acme Basket Mfg. Co., 418 No. Franklin St., Baltimore, Md.  
American Wire Form Co., 205 Grant Ave., Jersey City, N. J.  
Anderson Box & Basket Co., Henderson, Ky.  
Backus, Jr., A. & Sons, 1540 Lafayette Blvd., Detroit, Mich.  
Badger Basket & Veneer Co., Burlington, Wis.  
Ballou & Son, M. E., Becket, Mass.  
Belle City Basket Co., Racine, Wis.  
Bryant, John T., Springfield, Ohio.  
Burlington Basket Co., Burlington, Iowa.  
Day Basket Works, E. T. B., Northeast, Md.  
Diamond State Fibre Co., East Bridgeport, Pa.  
Eastern States Package Co., Inc., Penn Yann, N. Y.  
Guile & Windnagle, Inc., Penn Yann, N. Y.  
Hamblin & Russell Mfg. Co., Inc., Worcester, Mass.  
Iden Co., Wm. A., 564 Washington Bldg., Chicago, Ill.  
Massillon Wire Baskets Co., Massillon, Ohio.  
Miami Mfg. Co., Peru, Ind.  
Milwaukee Wire Frame Co., 62 Mason St., Milwaukee, Wis.  
Morris & Co., Inc., 15 Main St., Groveville, N. J.  
National Vulcanized Fibre Co., East Wilmington, Del.  
Oeters Co., Edgar O., 601 Arch St., Philadelphia, Pa.  
Oxford Basket & Mfg. Co., Oxford, N. Y.  
Peerless Wire Goods Co., 2710 Ferry St., Lafayette, Ind.  
Philadelphia Paper Mfg. Co., Nixon & Fountain Sts., Philadelphia, Pa.  
Phoenix Wire Works, Kirby Ave., Detroit, Mich.  
Portland Basket & Handle Co., Portland, Ore.  
St. Louis Basket & Box Co., 150 Arsenal St., St. Louis, Mo.  
Steel Basket & Mfg. Co., Cedar Rapids, Iowa.  
Wickwire Spencer Steel Corp., 41 East 42nd St., New York, N. Y.

Gary & Son, George, Athol, Mass.  
Giant Mfg Co., Council Bluffs, Iowa.  
Invincible Vacuum Cleaner Mfg. Co., Dover, Ohio.  
Kent Co., Inc., 565 Dominick St., Rome, N. Y.  
Nusley Brothers, Canton, Ohio.  
Orcutt Vacuum System, Harvard & Delmar Sts., St. Louis, Mo.  
Pneuvac Co., Worcester, Mass.  
Reed Mfg. Co., Springfield, Ohio.  
Scott & Fetzer, W. 114th & Locust Ave., Cleveland, Ohio.

## BOX STRAPPING MACHINES

Acme Steel Goods Co., 2840 Archer Ave., Chicago, Ill.  
American Casting & Mfg. Corp., Main St., Brooklyn, N. Y.  
American Steel Band Co., 1400 Nixon St., Pittsburgh, Pa.  
American Steel & Wire Co., 208 S. LaSalle St., Chicago, Ill.  
Brooks & Co., E. J., 6 Church St., New York, N. Y.  
Cary Mfg. Co., Nassau & Jay Sts., Brooklyn, N. Y.  
Consolidated Steel Strapping Co., 2000 No. Western Ave., Chicago, Ill.  
DeHaven Mfg. Co., 50 Columbia Heights, Brooklyn, N. Y.  
Gerrard Wire Tying Machines Co., 1940 S. 52nd St., Chicago, Ill.  
Grammes, L. F. & Sons, Allentown, Pa.  
Harvey Spring & Forging Co., Racine, Wis.  
Hollow Cable Mfg. Co., Hornell, N. Y.  
Robertson Steel & Iron Co., W. F., Cincinnati, Ohio.  
Signode System, 2600 N. Western Ave., Chicago, Ill.  
Stanley Works, Grove Hill & Lake St., New Britain, Conn.  
Ti-It Machines Co., Monad Bldg., San Francisco, Calif.  
Wire & Steel Products Co., 313 E. 22nd St., New York, N. Y.

## CARPET CLEANING EQUIPMENT

Air-Way Electric Appliance Corp., Toledo, Ohio.  
Apex Elec. Mfg. Co., 1067 E. 152nd St., Cleveland, Ohio.  
**Arco Vacuum Corp., 40 W. 40th St., New York, N. Y. (See advertisement elsewhere in this issue.)**  
Atwood-Stewart Vacuum Mche. Co., 4527 Ravenswood Ave., Chicago, Ill.  
Birtman Electric Co., 4140 Fullerton Ave., Chicago, Ill.  
Chief Mfg. Co., 806 Beecher St., Indianapolis, Ind.  
Cleveland Laundry Mche. Co., E 55th St. & Erie R.R., Cleveland, Ohio.  
Edison Elec. Appliance Co., Inc., 5000 W. Taylor St., Chicago, Ill.  
Electric Rotary Mche. Co., 3825 W. Lake St., Chicago, Ill.  
Electric Vacuum Cleaner Co., Inc., Euclid Ave. & Ivanhoe Rd., Cleveland, Ohio.  
Federal Elec. Co., 8700 S. State St., Chicago, Ill.

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"Connerville" is the superior carpet cleaning equipment.

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 Sturtevant Co., Inc., B. F. 16 Damon St., Hyde Park, Boston, Mass.  
 The Torrington Co., Torrington, Conn.  
 United Electric Co., Canton, Ohio.  
**United Vacuum Appliance Corp., Connersville, Ind.**  
 Wise-McClung Mfg. Co., New Philadelphia, Ohio.  
 Wright, M. S., Worcester, Mass.

## CASES, SHIPPING

American Can Co., 129 Broadway, New York, N. Y.  
 Backus, Jr., A., & Sons, 1540 Lafayette Blvd., Detroit, Mich.  
 Bird & Son, Inc., Mill St., E. Walpole, Mass.  
 Bogert & Hopper, Inc., 64 Barclay St., New York, N. Y.  
 Estes & Sons, E. B. 364 Fifth Ave., New York, N. Y.  
 General Box Co., 508 No. Dearborn St., Chicago, Ill.  
 Hinde & Dauch Paper Co., 254 Water St., Sandusky, Ohio.  
 Hummel & Downing, Milwaukee, Wis.  
 Interstate Corrugated Box Co., Inc., Front, Main, Water & Washington Sts., Brooklyn, N. Y.  
 King Shipping Case Corp., 376 W. Water St., Syracuse, N. Y.  
 Midwest Box Co., Room 47, 1435 Conway Bldg., Chicago, Ill.  
 Rochester Folding Box Co., P. O. Box 1012, Rochester, N. Y.  
 Thompson & Norris Co., 212 Concord St., Brooklyn, N. Y.  
 Truscon Steel Co., Youngstown, Ohio.  
 Western Pine Mfgs. Assn., 512 Yeon Bldg., Portland, Ore.  
 Wisconsin Box Co., Wausau, Wis.

## CASTERS, TRUCK

Adams Co., Dubuque, Iowa.  
 American Caster Co., Central Ave. & Washington St., Hamilton, Ohio.  
 American Foundry & Mfg. Co., 11th & Hebert Sts., St. Louis, Mo.  
 Bassick Co., 28 Austin St., Bridgeport, Conn.  
 Bond Foundry & Mfg. Co., Manheim, Pa.  
 Buffalo Pulley & Caster Co., Inc., 184 Breckenridge St., Buffalo, N. Y.  
 Clark Co., George P., 10 Canal St., Windsor Locks, Conn.  
 Colson Company, Elyria, Ohio.  
 Divine Bros. Co., Utica, N. Y.  
 Equipment Mfg. Co., 1848 E. 6th St., Cleveland, Ohio.  
 Fairbanks Co., 416 Broome St., New York, N. Y.  
 Faultless Caster Co., Evansville, Ind.  
 Fleming Co., F. A., 9703 Baltic Rd., Cleveland, Ohio.  
 Francis Co., Chas. E., Rushville, Ind.  
 Greenan Mfg. Co., 1280 17th St., Detroit, Mich.  
 Hamilton Caster & Mfg. Co., Hamilton, Ohio.  
 Hyatt Roller Bearing Co., Newark, N. J.  
 Jarvis & Jarvis, 110 Pleasant St., Palmer, Mass.  
 Kerstone Forging Co., Northumberland, Pa.  
 Koenig & Co., Edward L., 569 West Lake St., Chicago, Ill.  
 Lansing Co., 602 Cedar St., Lansing, Mich.  
 Lyon Iron Works, Inc., Greene, N. Y.  
 Market Forge Co., Everett, Mass.  
 Meriden, Foster, Merriam Co., Meriden, Conn.  
 Mullins Body Corp., 1017 Mill St., Salem, Ohio.  
 New Britain Mfg. Co., 140 Chestnut St., New Britain, Conn.  
 Nice Ball Bearing Co., 2925 Hunting Park Ave., Nicetown, Philadelphia, Pa.  
**Notting Truck Co., Faribault, Minn. (See advertisement elsewhere in this issue.)**  
 Payson Mfg. Co., 2900 W. Jackson Blvd., Chicago, Ill.  
 Phoenix Caster Co., State & Bates Sts., Indianapolis, Ind.  
 Reading Hardware Co., Reading, Pa.  
 Sargent & Co., New Haven, Conn.  
 Schatz Mfg. Co., West Poughkeepsie, N. Y.  
 Service Caster & Truck Co., Albion, Mich.  
 Tucker & Dorsey Mfg. Co., S. State & Bates Sts., Indianapolis, Ind.  
 Warren Mfg. Co., Springfield, Mass.  
 Wolverine Caster Co., Traverse City, Mich.  
 Zering Mfg. Co., H., Brownway & Railroad Sts., Oakley, Cincinnati, Ohio.

## CLOCKS, TIME

Adams Mfg. Co., Henry T., 8561 S. Chicago Ave., Chicago, Ill.  
 American Watchmen's Clock Co., 152 Nassau St., New York, N. Y.  
 American Watchmen's Time Detector Co., Room 1144, Woolworth Bldg., New York, N. Y.  
 Automatic Time Stamp Co., 164 Congress St., Boston, Mass.  
 Bundy Recording Co., W. H., 72 Cortlandt St., New York, N. Y.  
 Calculagraph Co., 59 Church St., New York, N. Y.  
 Cincinnati Time Recorder Co., 1733 Central Ave., Cincinnati, Ohio.  
 Detex Waterclock Corp., 4147 E. Ravenswood Ave., Chicago, Ill.  
 Gisholt Machine Co., Madison, Wis.  
 Howard Clock Co., E., Bromfield & Washington Sts., Boston, Mass.  
 Imhauser Co., E., 212 Broadway, New York, N. Y.  
 International Business Machines Corp., 50 Broad St., New York, N. Y.  
 Monitor Time Clock Co., Syracuse, N. Y.  
 Ohmer Fare Register Co., Dayton, Ohio.  
 Pacific Elec. Clock Co., 86 Third St., San Francisco, Cal.  
 Pettes & Randall Co., 152 Nassau St., New York, N. Y.  
 Rawson Electrical Instrument Co., Cambridge, Mass.  
 Silberberg, Mortimer J., 122 S. Michigan Ave., Chicago, Ill.  
 Simplex Time Recorder Co., Gardner, Mass.  
 Standard Register Co., Dayton, Ohio.  
 Stromberg Elec. Co., 209 W. Jackson Blvd., Chicago, Ill.  
 Thompson Time Stamp Co., Inc., 98 Church St., New York, N. Y.  
 Time Register Repair & Supply Co., Canastota, N. Y.  
 Warren Clock Co., Ashland, Mass.

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Acme Road Machinery Co., Frankfort, N. Y.  
 Allis-Chalmers Mfg. Co., Milwaukee, Wis.  
 Alvey Ferguson Co., 70 North Ave., Cincinnati, Ohio.  
 Alvey Machy. Co., 3201 Broadway, St. Louis, Mo.  
 Bailey Burruss Co., Atlanta, Ga.  
 Bartlett Co., Hayward, Scott & McHenry Sts., Baltimore, Md.  
 Bartlett & Snow Co., C. O., 6250 Harvard Ave., Cleveland, Ohio.  
 Beaumont Co., E. H., 319 Arch St., Philadelphia, Pa.  
 Bodinson Mfg. Co., 11 Minna St., San Francisco, Cal.  
 Brown Hoisting Mch. Co., 4403 St. Clair St., N. E., Cleveland, Ohio.  
 Buhl Malleable Co., Cor. Wight & Adair Sts., Detroit, Mich.  
 Caldwell & Son, H. W., 17th & Western Ave., Chicago, Ill.  
 Chain Belt Co., 744 Park St., Milwaukee, Wis.  
 Chicago Automatic Conveyor Co., 982 Old Colony Bldg., Chicago, Ill.  
 Dodge Mfg. Corp., Mishawaka, Ind.  
 Freeman-Riff Co., Terre Haute, Ind.

General Conveyor & Mfg. Co., Broadway & Miami Sts., St. Louis, Mo.  
 Gifford-Wood Co., Hudson, N. Y.  
 Godfrey Conveyor Co., Elkhart, Ind.  
 Griffin Lumber Co., Hudson Falls, N. Y.  
 Haiss Mfg. Co., Geo., 145th St. & Canal Pl., New York, N. Y.  
 Haslett Chute & Conveyor Co., Oaks, Pa.  
 Howe Chain Co., 110 Clay Ave. E., Muskegon, Mich.  
 Hunt Co., Inc., C. W., Livingston, Staten Island, N. Y.  
 Jeffrey Mfg. Co., 961 No. 4th St., Columbus, Ohio.  
 Joy Machine Co., Pittsburgh, Pa.  
 Kiefer Machine Co., Karl, 919 Martin St., Cincinnati, Ohio.  
 Lamson Co., Syracuse, N. Y.  
 Link-Belt Co., 300 W. Pershing Rd., Chicago, Ill.  
 Logan Co., 201 N. Buchanan St., Louisville, Ky.  
 Loudon Mch. Co., 1116 Broadway, Fairfield, Iowa.  
 McKinney-Harrington Co., North Chicago, Ill.  
 Mathews Conveyor Co., Ellwood City, Pa.  
 Meyer Mfg. Co., Geo. J., 576 Clinton St., Milwaukee, Wis.  
 Northern Conveyor & Mfg. Co., 3280 Auer Ave., Milwaukee, Wis.  
 Ogden Iron Works, Ogden, Utah.  
 Olson & Co., Samuel, 2416 Bloomingdale Ave., Chicago, Ill.  
 Otis Elevator Co., 260 11th Ave., New York, N. Y.  
 Portable Machinery Co., Passaic, N. J.  
 Proctor & Schwartz, Inc., 700 Tabor Rd., Philadelphia, Pa.  
**Richards-Wilcox Co., 316 W. Third St., Aurora, Ill. (See advertisement elsewhere in this issue.)**  
 Russell Wheel & Foundry Co., Detroit, Mich.  
 Standard Conveyor Co., 315 Second Ave., N. W., North St. Paul, Minn.  
 Stearns Conveyor Co., E. 20th St. & St. Clair Ave., Cleveland, Ohio.  
 Webster Mfg. Co., 4500 Cortlandt St., Chicago, Ill.  
 Weller Mfg. Co., 1856 N. Kostner Ave., Chicago, Ill.

## DOORS, COLD STORAGE

Born Co., H. A., 208 N. Wabash Ave., Chicago, Ill.  
 Ehrlich & Sons Mfg. Co., H., St. Joseph, Mo.  
 Gillen-Cole Co., 66 N. Front St., Portland, Ore.  
 Gloekler-Bernard, 1027 Penn Ave., Pittsburgh, Pa.  
 Jamison Cold Storage Door Co., Hagerstown, Md.  
 Jones Cold Storage Door Co., Hagerstown, Md.  
 Matot, Duffy A., 1546 Montana St., Chicago, Ill.  
 National Refrigerator Co., 827 Koeln Ave., St. Louis, Mo.  
 Schmidt Co., C. John & Livingston Sts., Cincinnati, Ohio.  
 Seattle Asbestos Factory, 1538 Westlake Ave., N., Seattle, Wash.  
 Stevens Co., Ben A., Toledo, Ohio.  
 Stevenson Cold Storage Door Co., Chester, Pa.  
 Union Fibre Co., Inc., Winona, Minn.  
 Variety Mfg. Co., 2958 Carroll Ave., Chicago, Ill.  
 Ward Refrigerator & Mfg. Co., 6801 Alameda St., Los Angeles, Cal.  
 Ward's Organization, E. J., 163 So. 17th St., St. Louis, Mo.  
 York Products Corp., 832 Folsom St., San Francisco, Cal.

## DOORS, ELEVATOR

Bataille & Co., Inc., A., 401 West St., New York, N. Y.  
 Cincinnati Mfg. Co., 1900 Gest St., Cincinnati, Ohio.  
 Cornell Iron Works, 20th & 11th Ave., New York, N. Y.  
 Edwards Mfg. Co., 529 Eggleston Ave., Cincinnati, Ohio.  
 Hanke Wire & Iron Works, 800 N. Albany Ave., Chicago, Ill.  
 Hecla-Winslow Co., 4604 W. Harrison St., Chicago, Ill.  
 Kinneer Mfg. Co., 736 Field Ave., Columbus, Ohio.  
 Lambert Metal Door Co., 184 Lorain Ave., Columbus, Ohio.  
**Peele Co., The, Harrison Place & Stewart Ave., Brooklyn, N. Y. (See advertisement elsewhere in this issue.)**  
 Smith Wire & Iron Works, F. P., Fullerton, Clybourn & Ashland Aves., Chicago, Ill.  
 Tyler Co., W. S., 3621 Superior Ave., N. E., Cleveland, Ohio.  
 Warsaw Elevator Co., 216 Fulton St., Warsaw, N. Y.

## DOORS, FIRE

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 Robert & Carrough Co., Washington Ave., Paterson, N. J.  
 California Fpt. Door Co., 1931 S. Los Angeles St., Los Angeles, Cal.  
 Campbell Steel Prod. Co., 1700 Central Ave., Minneapolis, Minn.  
 Coburn Trolley Truck Mfg. Co., Holyoke, Mass.  
 Cornell Iron Works, 20th & 11th Ave., New York, N. Y.  
 Edwards Mfg. Co., 529 Eggleston Ave., Cincinnati, Ohio.  
 Hanke Wire & Iron Works, 800 N. Albany Ave., Chicago, Ill.  
 Harris Preble Door Co., 2424 W. 22nd St., Chicago, Ill.  
 Kinneer Mfg. Co., 736 Field Ave., Columbus, Ohio.  
 Lambert Metal Door Co., 184 Lorain Ave., Columbus, Ohio.  
 Lee & Son Co., Thomas, 130 W. Second St., Cincinnati, Ohio.  
 Merchant & Evans Co., Philadelphia, Pa.  
 Moeschl-Edwards Corrugating Co., Cincinnati, Ohio.  
 Ogden Co., J. Edward, 147 Cedar St., New York, N. Y.



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*(See advertisement elsewhere in this issue.)*  
 Penn. Seaboard Steel Corp., 1417 Sanson St., Philadelphia, Pa.  
**Richards-Wilcox Mfg. Co., 316 W. Third St., Aurora, Ill.**  
*(See advertisement elsewhere in this issue.)*  
 Richmond Fireproof Door Co., Richmond, Ind.  
 St. Louis Fire Door Co., 1142 S. Sixth St., St. Louis, Mo.  
 Smith Wire & Iron Works, F. P., 2340 Clybourne Ave., Chicago, Ill.  
 Truscott Steel Co., Youngstown, Ohio.  
 Tyler Co., W. S., 3621 Superior Ave., N. E., Cleveland, Ohio.  
 Variety Mfg. Co., 2958 Carroll Ave., Chicago, Ill.  
**Vulcan Rail & Mfg. Co., Grand St. & Garrison Ave., Maspeth, N. Y.**  
 Wilson Corp., J. G., 11 E. 36th St., New York, N. Y.

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Ajax Fire Engines Works, 882 Third Ave., Brooklyn, N. Y.  
 American-La France Fire Engine Co., 900 Erie St., Elmira, N. Y.  
 Automatic Fire Sprinkler Co., 17 W. 37th St., New York, N. Y.  
 Automatic Sprinkler Co. of Am., 123 William St., New York, N. Y.  
 Barnes, Henry K., 234 Devonshire St., Boston, Mass.  
 Bethlehem Shipbuilding Corp., Ltd., Bethlehem, Pa.  
 Bridgeport Brass Co., East Main St., Bridgeport, Conn.  
 Callahan Co., C., 297 Congress St., Boston, Mass.  
 Croker Nat'l Fire Prev. Eng. Co., 22 W. 30th St., New York, N. Y.  
 Diener Mfg. Co., 492 Monticello Ave., Chicago, Ill.  
 Elkhart Brass Mfg. Co., Elkhart, Ind.  
 Esty Sprinkler Co., Laconia, N. H.  
 Fireite Extinguisher Co., Masetown, Pa.  
 Foamite Childs Corp., Utica, N. Y.  
 Fyr-Fyter Co., 221 Crane St., Dayton, Ohio.  
 Gaylord Sanitary Mfg. Co., 1 Gleason Pl., Eldorado, Kan.  
 Gilbert & Sons, A., 4015 Forest Park Bldg., St. Louis, Mo.  
 Gorham Fire Apparatus Co., 206 Drumm St., San Francisco, Cal.  
 Grinnell Co., Inc., 275 W. Exchange St., Providence, R. I.  
 Hunt Mfg. Co., Jas. B., Forest Richey Bldg., Trenton, N. J.  
 Johns-Manville Co., H. W., Madison Ave. & 41st St., New York, N. Y.  
 Knight & Thomas, Inc., 212 Summer St., Boston, Mass.  
 New Process Roofing & Sy. Co., Dallas, Texas.  
 Niagara Smelting Corp., Bridge Sta., Niagara Falls, N. Y.  
 Northern Pump Co., 920 18th Ave., N. E., Minneapolis, Minn.  
 Obenchain-Boyer Co., Logansport, Ind.  
 Oil Conservation Eng. Co., 877 Addison Rd., Cleveland, Ohio.  
 Pacific Fire Extinguisher Co., 440 Howard St., San Francisco, Cal.  
 Pyrene Mfg. Co., 520 Belmont Ave., Newark, N. J.  
 Robinson Fire App. Mfg. Co., 4268 N. 20th St., St. Louis, Mo.  
 Safety Fire Extinguisher Co., 299 Seventh Ave., New York, N. Y.  
 Severn Fire & Supply Co., Fifth & Broadway, Oklahoma City, Okla.  
 Simmons Co., John, 110 Centre St., New York, N. Y.  
 Stempel Fire Extinguisher Mfg. Co., 20th & Ferry Sts., St. Louis, Mo.  
 Vogel Co., H. G., 17 W. 37th St., New York, N. Y.

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Boston & Lockport Block Co., 100 Condon St., East Boston, Mass.  
 Box & Co., Inc., Alfred, Ontario & Trenton Sts., Philadelphia, Pa.  
 Chisholm-Moore Mfg. Co., Cor. E. 49th St. & Lakeside Ave., Cleveland, Ohio.  
 Ford Chain Block Co., Second & Diamond Sts., Philadelphia, Pa.  
 Green Co., Inc., G. S., 72 Warren St., New York, N. Y.  
 Harrington Co., Callowhill & 17th St., Philadelphia, Pa.  
 Haslett Spiral Chute Co., 510 N. 61st St., Philadelphia, Pa.  
 Hobbs & Co., Clinton, 3335 Pearl St., Boston, Mass.  
 Moore Co., Franklin, Winsted, Conn.  
 Morris, Inc., Herbert, 10 Lawrence Pl., Buffalo, N. Y.  
 Ogden Iron Works Co., Ogden, Utah.  
 Olsen Testing Machine Co., Tinius, Philadelphia, Pa.  
 Reading Chain & Block Corp., 2100 Adams St., Reading, Pa.  
 Roeper Crane & Hoist Works, Inc., 1738 N. 10th St., Reading, Pa.  
 Seattle Chain & Mfg. Co., 6921 E. Marginal Way, Seattle, Wash.  
 Speidel Elevator Corp., 245 W. Buttonwood St., Reading, Pa.  
 Topping Bros., 158 Varick St., New York, N. Y.  
 Wright Mfg. Co., 1918 Thomas St., Lisbon, Ohio.  
 Yale & Towne Mfg. Co., Stamford, Conn.

## INSECTICIDES

American Cyanamid Co., 511 Fifth Ave., New York, N. Y.  
 Carbola Chemical Co., 305 Ely Ave., Long Island City, N. Y.  
 Chemical Supply Co., 2450 Canal Road, Cleveland, Ohio.  
 Clarkson Chemical Co., 141 W. Willow St., Williamsport, Pa.  
 Enoz Chemical Co., Logan Blvd. & Western Ave., Chicago, Ill.  
 Ferguson, Jr., Alex. C., 460 Chestnut St., Philadelphia, Pa.  
 Gerard Co., Inc., Felix, Fourth Ave. & Franklin, Minneapolis, Minn.  
 Grasselli Chemical Co., Guardian Bldg., Cleveland, Ohio.  
 Hall Laboratories, 428 E. 35th St., Chicago, Ill.  
 Larvex Corp., 47 Rodney St., Brooklyn, N. Y.  
 Penick & Co., Inc., S. B., 113 Fulton St., New York, N. Y.  
 Plunkett Chemical Co., 3500 So. Morgan St., Chicago, Ill.  
 Ply Metal Co., Chamber of Commerce Bldg., Chicago, Ill.  
 Standard Oil Co. of N. J., 26 Broadway, New York, N. Y.  
 Tinsol Co. of Am., 150 Nassau St., New York, N. Y.  
 Varner Chemical Co., Lexington Ave. & 43rd St., New York, N. Y.  
 Wells, E. S., Jersey City, N. J.  
 West Disinfecting Co., 16 Barn St., Long Island City, N. Y.  
**White Tar Co., 56 Vesey St., New York, N. Y.**

## Nobody Pays for It

Nobody pays for the time and labor saving machine which cuts down the warehouseman's overhead and increases his handling capacity—it pays for itself.

Nobody pays for the motor truck which builds business and increases distribution efficiency—it pays for itself.

Nobody pays for the advertising which cuts down selling cost and puts business on a quantity basis—it pays for itself.

—With credit to Campbell's Current.

## INSECTICIDES (Continued)

Absolute Protection  
from Moths

Take no risks—wrap carpets, rugs, draperies, etc., with **WHITE TAR Paper**. Forty inches wide, in rolls of from 50 to 1000 yards.

Other White Tar products: Naphthalene Flakes, Moth Proof Bags, Cedar Paper, White Tar Moth Spray, Moth Balls, Crystals, Powder and Blocks.



The White Tar  
Company of  
New Jersey, Inc.  
56 Vesey St., New York City

## MILEAGE RECORDERS, MOTOR TRUCK

American Taximeter Co., 22 W. 61st St., New York, N. Y.  
 Brown Spring Oiler Co., 6911 Carnegie Ave., Cleveland, Ohio.  
 Keuffel & Esser Co., Hoboken, N. J.  
 Ohmer Fare Register Co., Dayton, Ohio.  
 Sattler, Hans, Sheboygan, Wis.  
 Sears-Cross Co., 19 W. 62nd St., New York, N. Y.  
 Service Recorder Co., 454 Hanna Bldg., Cleveland, Ohio.  
 Stewart-Warner Speedometer Corp., Diversey Bldg., Chicago, Ill.  
 Veeder Mfg. Co., 54 Sargeant St., Hartford, Conn.

## OVERALLS

(See Work Suits)

## PADS, EXCELSIOR

Altamont Mfg. Co., Altamont, Ill.  
 American Forest Prod. Co., 34th & Race Sts., Philadelphia, Pa.  
 Atlantic Excelsior Co., Inc., 500 W. 30th St., New York, N. Y.

**Baled Excelsior**

**Excelsior Packing Pads**

**Wood Wool**

**DU PRE** *Manufacturing Co.*  
Atlanta, Ga.

WHEN WRITING ADVERTISERS MENTION DISTRIBUTION AND WAREHOUSING

## PADS, EXCELSIOR (Continued)

Boston Excelsior Co., 290 11th Ave., New York, N. Y.  
 Burkart Mfg. Co., F., 4900 N. Second St., St. Louis, Mo.  
 Clark Paper & Mfg. Co., 1611 Dewey Ave., Rochester, N. Y.  
 Dale Bros. Excelsior Pad Co., Grand Rapids, Mich.  
 Decatur Coopers Co., Decatur, Ind.  
 Dupre Mfg. Co., E. North Ave. & So. Ry., Atlanta, Ga.  
 Excelsior Packing Co., Second & Smith Sts., Cincinnati, Ohio.  
 Excelsior Supply Co., Second & Smith Sts., Cincinnati, Ohio.  
 Excelsior Wrapper Co., 224 W. Kinzie St., Chicago, Ill.  
 Henderson Excelsior & Packing Pad Co., Inc., Henderson, Ky.  
 High Point Pad & Excelsior Co., High Point, N. C.  
 Indiana Excelsior Co., Ind. Pythian Bldg., Indianapolis, Ind.  
 North Jersey Excelsior Co., 88 Alyea St., Newark, N. Y.  
 Orange Mfg. Co., Elfland, N. C.  
 Peerless Pad Co., Thomasville, N. C.  
 Peerless Packing Pad Co., 322 Fifth St., Jersey City, N. J.  
 Philadelphia Excelsior Co., 716 N. Third St., Philadelphia, Pa.  
 Phillips Excelsior Co., Chattanooga, Tenn.  
 Quincy North Star Co., Quincy, Ill.  
 St. Louis Excelsior & S. Co., 8 North Levee, St. Louis, Mo.  
 Selle & Co., H. W., 1000 N. Halsted St., Chicago, Ill.  
 Sheboygan Pad Co., Sheboygan, Wis.  
 Washington Excelsior & Mfg. Co., Foot of Main St., Seattle, Wash.  
 Webster Bros. Mfg. Co., Mason City, Iowa.



## MAKING GOOD

— in a Big Way!

A constant stream of inquiries and orders from the nation's biggest shippers proves that Pioneer Excelsior Packing Pads are still setting standards in the excelsior field. The reason? Thoroughly dependable protection because of built-in quality. If you want to know why Pioneer Pads are better, send for samples. No obligation!

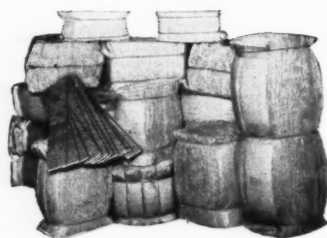
Excelsior Wrapper Co.

Established 1888

GRAND RAPIDS, MICHIGAN

Sheboygan, Wis. 224 W. Kinzie St., Chicago

© 1926



You can't keep a good excelsior pad down—it takes the blows and springs up for more. Protex Excelsior Pads are resilient. They give your shipments permanent protection.

## H. W. SELLE &amp; COMPANY

1000 N. Halsted St., Chicago, Illinois

Manufacturers—Protex Excelsior Pads—also

WOOD WOOL—WOOD WOOL PADS—BALED EXCELSIOR

## PADS, FURNITURE

Arbelt Co., S., 119 McKibben St., Brooklyn, N. Y.  
 Booth Felt Co., Inc., 490 19th St., Brooklyn, N. Y.  
 Brawley, J. R., 276 20th St., Brooklyn, N. Y.  
 Breen, Wm. H., 219 Rutherford Ave., Charlestown, Mass.  
 (See advertisement elsewhere in this issue.)  
 Brooklyn Bag Mfg. Co., 728 Atlantic Ave., Brooklyn, N. Y.  
 Chicago Quilt Mfg. Co., 1357 Roosevelt Rd., Chicago, Ill.  
 Detroit Canvas Co., 937 E. Larned St., Detroit, Mich.  
 Donnelly, Son & Putnam, 23 Lispenard St., New York, N. Y.  
 Dupre Mfg. Co., E. North Ave. & So. Ry., Atlanta, Ga.  
 (See advertisement elsewhere in this issue.)  
 Empire Mattress Co., 2231 W. Madison St., Chicago, Ill.  
 Excelsior Wrapper Co., 224 W. Kinzie St., Chicago, Ill.  
 Felt Parts Co., 351 Jay St., Brooklyn, N. Y.  
 Fulton Bag & Cotton Mills, 330 Wythe Ave., Brooklyn, N. Y.  
 Hettrick Mfg. Co., Summit & Magnolia Sts., Toledo, Ohio.  
 Iden Co., Wm. A., 564 Washington Blvd., Chicago, Ill.  
 Levine Bedding Co., David H., 80-86 Franklin St., New Haven, Conn.  
 Little Rock Excelsior Mfg. Co., No. Little Rock, Ark.  
 Louisville Bedding Co., Louisville, Ky. (See advertisement inside Back Cover.)  
 Lyons & Healy, Wabash Ave. & Jackson Blvd., Chicago, Ill.  
 Maish Co., Chas. A., 1125 Bank St., Cincinnati, Ohio.  
 Malis Supply Co., 421 Arch St., Philadelphia, Pa.  
 Milvo Awning & Tent Works, 101 W. Liberty St., Rome, N. Y.  
 New Haven Quilt & Pad Co., 80 Franklin St., New Haven, Conn.  
 New York Drop Cloth Co., 150 Bleeker St., New York, N. Y.  
 Oshkosh Excelsior Co., Oshkosh, Wis.

“PLAY SAFE”  
USE “PROTECTO” PADS

Made of Extra Heavy Drill Denim,  
Layer Cotton Filled

Note: “PROTECTO” Pads  
New Stitching Adds to  
Strength and Durability.

## SPECIAL PRICES

No. 12—Cut size of cloth 72x80....\$30.00 per doz.  
 No. 14—Cut size of cloth 54x72.... 23.50 per doz.  
 No. 16—Cut size of cloth 36x72.... 17.00 per doz.  
 Phonograph Covers ..... 5.00 Each  
 Canvas Piano Covers..... 12.00 Each

Write or wire your order.

CHICAGO QUILT MANUFACTURING CO.  
1355-57 Roosevelt Road Chicago, Ill.

## “None Better Made”

D.S.P.

“DOUBLE SERVICE PADS”

QUALITY FURNITURE VAN PADS  
 QUALITY VAN LINER PADS  
 QUALITY PIANO COVERS, TARPAULINS

AT

NATIONALLY KNOWN LOW PRICES  
 STANDARD SIZES—COMPARE

Donnelly, Son &amp; Putnam

23-25 Lispenard St.

New York

## FURNITURE

PADS

Strongly sewed with cross stitch.  
 Evenly padded. Immediate shipment.  
 TARPAULINS—BURLAP—BAGS

FULTON BAG &amp; COTTON MILLS, Inc.

330 WYTHE AVE. Estab. 1870 BROOKLYN, N. Y.  
 Atlanta Dallas St. Louis New Orleans Minneapolis

WHEN WRITING ADVERTISERS MENTION DISTRIBUTION AND WAREHOUSING

## PADS, FURNITURE (Continued)

Ottawa Cushion Co., Rock Island, Ill.  
 Peerless Packing Pad Co., 322 Fifth St., Jersey City, N. J.  
 Perfect Packing Pad Co., 1130 Cherry St., Chicago, Ill.  
**Reach Textile Co., A. L., 222 E. 42nd St., New York, N. Y.**  
 Richards Mfg. Co., 950 N. Eighth St., Philadelphia, Pa.  
 Rochester Pad & Wrapper Co., Rochester, N. Y.  
 Royal Bedding Co., 1012 N. 12th St., St. Louis, Mo.  
**Selle & Co., H. W., 1000 N. Halsted St., Chicago, Ill.**  
*(See advertisement elsewhere in this issue.)*  
 Shelbygan Pad Co., Shelbygan, Wis.  
 Standard Tent & Awning Co., Michigan & Orange St., Toledo, Ohio.  
 Star Felt Cutting Co., 260 69th St. near 3rd Ave., Brooklyn, N. Y.  
 Star Quilt Mfg. Co., 1855 W. Roosevelt Rd., Chicago, Ill.  
 Union Carpet Lining Co., New London, Conn.  
 Wagner Awning Mfg. Co., 2658 Scranton Rd., Cleveland, Ohio.

## "IRON HORSE" BRAND Furniture Van Pads

*Foremost in Quality, Workmanship  
and Strength*



**KNOWN AS  
THE BEST**

**A. L. Reach Textile Co., Inc.**

Main Office and Sales Room  
 222-224 East 42nd Street  
 New York, N. Y.

## PARTITIONS, STEEL

Cyclone Fence Co., Waukegan, Ill.  
 Ebinger Sanitary Mfg. Co., D. A., 180 Lucas St., Columbus, Ohio.  
 Edwards Mfg. Co., 529 Eggleston Ave., Cincinnati, Ohio.  
 Hauserman Co., E. F., 6802 Grant Ave., Cleveland, Ohio.  
 Lyon Metallic Mfg. Co., City Limits, Aurora, Ill.  
 Manufacturing Equip. & Eng. Co., 335 Marble St., Framingham, Mass.  
 Mills Co., The, 5320 St. Clair Ave., Cleveland, Ohio.  
 Page Fence & Wire Prod. Assn., 215 N. Michigan Ave., Chicago, Ill.  
 Phoenix Wire Works, Kirby Ave. and E. & G. T. R.R., Detroit, Mich.  
 Smith, F. P., Wire & Iron Works, Fullerton, Clybourn & Ashland Aves. & Chester St., Chicago, Ill.  
 Sonymetal Prod. Co., 1710 Urbana Rd., Cleveland, Ohio.  
 Tyler Co., W. S., 3621 Superior Ave., N. E., Cleveland, Ohio.

## PIANO COVERS

Astrup Co., 2937 W. 25th St., Cleveland, Ohio.  
 Bauer, Frederick J., 64 Fourth Ave., New York, N. Y.  
**Breen, Wm. H., 219 Rutherford Ave., Charlestown, Mass.**  
*(See advertisement elsewhere in this issue.)*  
 Brooklyn Bag Mfg. Co., 728 Atlantic Ave., Brooklyn, N. Y.  
 Buckeye Tent, Awning & Mfg. Co., 264 Spruce St., Columbus, Ohio.  
**Donnelly, Son & Putnam, 23 Lispenard St., New York, N. Y.**  
*(See advertisement elsewhere in this issue.)*  
 Driver Bros., Inc., 500 So. Green St., cor. Congress St., Chicago, Ill.  
 Goss Co., John C., Woodbridge & Bates St., Detroit, Mich.  
 Holtzman, Henry, & Sons Co., Columbus, Ohio.  
 Kennedy Car Liner & Bag Co., Shelbyville, Ind.  
 Kimball Co., W. W., 306 S. Wabash Ave., Chicago, Ill.  
 New Haven Quilt & Pad Co., 80 Franklin St., New Haven, Conn.  
 Upson-Walton Co., 1286 W. Eleventh St., Cleveland, Ohio.  
 Wilcox Co., M. I., Toledo, Ohio.

## Nobody Pays for It

Nobody pays for the time and labor saving machine which cuts down the warehouseman's overhead and increases his handling capacity—it pays for itself.

Nobody pays for the motor truck which builds business and increases distribution efficiency—it pays for itself. Nobody pays for the advertising which cuts down selling cost and puts business on a quantity basis—it pays for itself.

—With credit to Campbell's Current.

## Experienced Transfer Men

Choose

# MAISH LOADING PADS



## Every-Day Protection

Maximum protection under hardest service is assured by Maish Loading Pads. Strongly made of a one-piece layer of natural cotton, covered with sturdy, dark brown drill, and lock-stitched with heavy carpet thread. Practical tests have proven Maish value.

*Three Standard Sizes Carried in Stock for  
Immediate Delivery*

- No. 10 Cut size of cloth, 36 x 72  
Approximate finished size, 36 x 66
- No. 20 Cut size of cloth, 54 x 72  
Approximate finished size, 54 x 66
- No. 30 Cut size of cloth, 72 x 80  
Approximate finished size, 66 x 80

Packed in Corrugated Cartons—  
Shipping Units, One dozen of a size

*Write for prices today!*

**The Chas. A. Maish Company**

Pad Manufacturers Since 1878  
 1125-1127 Bank Street Cincinnati, Ohio



## PIANO DERRICKS AND TRUCKS

Breen, Wm. H., 219-231 Rutherford Ave., Charlestown, Mass.  
Self-Lifting Piano Truck Co., Findlay, Ohio



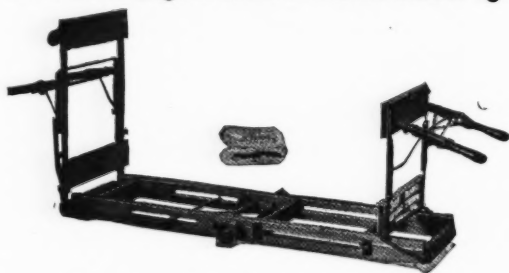
### BREEN PATENT PIANO DERRICK

for hoisting and lowering  
Pianos. Indispensable to Piano  
Movers. Adjustable to all  
windows and conditions.

I sell this derrick including  
heavy duck piano cover, lifting  
harness, iron bars with set  
of blocks and 300 feet of  $\frac{3}{4}$  inch  
Plymouth rope--All for \$115.  
F.O.B. Boston.

**WM. H. BREEN**  
219-231 Rutherford Ave.  
Charlestown, Mass.

### HOW DO YOU MOVE PIANOS IS YOUR EQUIPMENT COMPLETE ?



#### Truck with Straps, \$39.00

The New Buckeye Sill Piano Truck is designed for  
stair and general handling of grand and upright  
pianos.

The center wheel construction allows the truck to  
balance and turn without the usual lifting of the  
Truck and the scraping and marring of the floors.

No lifting is required to place the truck on the  
center wheels, just push down the bail, or lifting lever.

Hard wood sills, well bolted together forming a  
truss, make the platform of the truck sufficiently stiff  
and rigid to stand the heavy duty that these Trucks  
are subject to.

Also City Skid Trucks, eight styles of End Trucks,  
Piano Hoists, Covers, and Special Straps. Ask for  
circular.

Manufactured by

**SELF-LIFTING PIANO TRUCK CO.**  
FINDLAY, OHIO

### RACKS, STORAGE

Art Metal Construction Co., Jamestown, N. Y.  
Berger Mfg. Co., Canton, Ohio.  
Durand Steel Locker Co., 1537 Fort Dearborn Bank Bldg., Chicago, Ill.  
Heller, P. A., & Sons, 217 Griswold St., Detroit, Mich.  
Irving Iron Works Co., Dutchkill Creek & 3rd St., Long Island City, N. Y.  
Koenig & Co., Edward L., 569 West Lake St., Chicago, Ill.  
Lupton's Sons Co., David, Allegheny Ave. & Tulip St., Philadelphia, Pa.  
Lyon Metallic Mfg. Co., Aurora, Ill.  
Manufacturing Equip. & Eng. Co., 355 Marble St., Framingham, Mass.  
Medart Mfg. Co., Fred, Pontiac & DeKalb Sts., St. Louis, Mo.  
Mills Co., The, 5320 St. Clair Ave., Cleveland, Ohio.  
New Britain Mch. Co., 140 Chestnut St., New Britain, Conn.  
Penn Rivet Co., 3rd & Huntington Sts., Philadelphia, Pa.  
Perfection Metal Container, 3602 E. 82nd St., Cleveland, Ohio.  
Revolator Co., 336 Garfield Ave., Jersey City, N. J.  
Service Steel Prod. Co., 914 W. North Ave., Chicago, Ill.

WHEN WRITING ADVERTISERS MENTION DISTRIBUTION AND WAREHOUSING

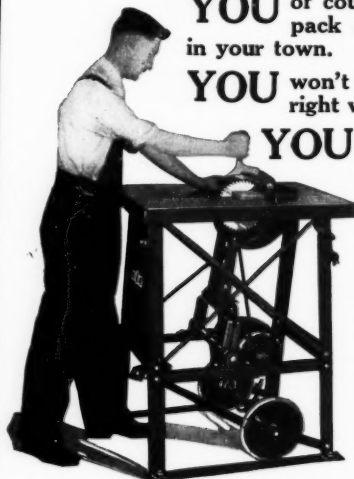
## SAWS, MACHINE

American Saw & Mfg. Co., 71 Boylston St., Springfield, Mass.  
American Saw Mill Mch. Co., Hackettstown, N. J.  
Atkins, E. C. & Co., Inc., 402 S. Illinois St., Indianapolis, Ind.  
C. H. & E. Mfg. Co., Milwaukee, Wis.  
Challenge Co., 193 River St., Batavia, Ill.  
Cresson-Morris Co., 18th & Allegheny Aves., Philadelphia, Pa.  
Disston, Hy., & Sons, Inc., Tacony Sta., Philadelphia, Pa.  
Electro-Magneto Tool Co., Cicero, Ill.  
Fairbanks, Morse & Co., So. Wabash Ave., Chicago, Ill.  
Kaetker Saw Co., 4600 Spring Grove Ave., Cincinnati, Ohio.  
Kennedy, Ralph M., 111 No. 7th St., Philadelphia, Pa.  
Lippert Saw Co., E. T., 19 Lincoln Ave., Millvale, Pittsburgh, Pa.  
Michel Elec. Hand Saw Co., 1801 Bernice Ave., Chicago, Ill.  
Neal Handy Saw Co., 7208 Euclid Ave., Cleveland, Ohio.  
New Holland Machine Co., New Holland, Pa.  
New Winona Mfg. Co., Winona, Minn.  
Ohlen-Bishop Co., Columbus, Ohio.  
**Onan, D. W., & Sons, 43 Royalston Ave., Minneapolis, Minn.**  
Oshkosh Mfr. Co., Oshkosh, Wis.  
Ransome Concrete Mch. Co., Dunellen, N. J.  
Schmidt Bros. Co., Davenport, Iowa.  
Simonds Saw & Steel Co., Fitchburg, Mass.  
Taylor Iron Works & Supply Co., Macon, Ga.  
Trevor Mfg. Co., 168 Market St., Lockport, N. Y.  
Wallace, J. D., & Co., 107 S. California Ave., Chicago, Ill.  
Worth Machinery Manufacturers, Los Angeles, Cal.

**YOU** of course, are the best to  
pack and crate furniture  
in your town.

**YOU** won't do it any but the  
right way.

**YOU** know what  
it costs



If you could save  
\$\$\$\$ from that  
cost, would you  
try an

### ONAN "SAFTY SAW"

Cuts crating faster; saves lumber; adds to your profits.  
LIGHT, SAFE, PORTABLE, INEXPENSIVE, COMPLETE  
SAW FOR YOUR WAREHOUSE.

Try it! It will cost you nothing. Write today for trial  
offer.

Manufactured by

**D. W. ONAN & SONS**  
60 Royalston Avenue MINNEAPOLIS, MINN.

### SCALES

American Kron Scale Co., 430 E. 53rd St., New York, N. Y.  
American Scale Co., 517 Delaware St., Kansas City, Mo.  
Barker & Son, Samuel G., Scranton, Pa.  
Beckman Bros., Des Moines, Iowa.  
Brunner Foundry & Mch. Co., Peru, Ill.  
Buffalo Scale Mfg. Co., Inc., 1200 Niagara St., Buffalo, N. Y.  
Chicago Scale Co., 7740 So. Chicago St., Chicago, Ill.  
Dayton Scale Co., Dayton, Ohio.  
Fairbanks Co., 416 Broome St., New York, N. Y.  
Fairbanks & Co., E. & T., St. Johnsbury, Vt.  
Fairbanks, Morse & Co., 900 S. Wabash Ave., Chicago, Ill.  
Gaston Scale Co., Beloit, Wis.  
General Automatic Scale Co., 310 S. 1st St., St. Louis, Mo.  
Howe Scale Co., Rutland, Vt.  
International Business Machines Corp., 50 Broad St., New York, N. Y.  
Meadows Mfg. Co., Bloomington, Ill.  
Merrick Scale Mfg. Co., Summer St., Passaic, N. J.  
Moline Implement Co., Inc., Moline, Ill.  
National Scale Corp., 25 Ware St., Chicopee Falls, Mass.  
Pneumatic Scale Corp., Ltd., Norfolk Downs, Mass.  
Sawyer Spec. Scale Co., Jacksonville, Fla.  
Smith Scale Co., 93 W. Gay St., Columbus, Ohio.  
Standard Scale & Sy. Co., 1631 Liberty St., Pittsburgh, Pa.  
Stimpson Computing Scale Co., Louisville, Ky.  
Toledo Scale Co., Toledo, Ohio.  
Weightograph Co., 310 So. First St., St. Louis, Mo.  
Winslow Government Standard Scale Wks., Terre Haute, Ind.

## STENCIL MACHINES

Auto-Mailing Mch. Co., Inc., Fitchburg, Mass.  
**Bradley Mfg. Co., A. J., 101 Beekman St., New York, N. Y.**  
 Diagram Stencil Mch. Corp., 1626 Kings Highway Blvd., St. Louis, Mo.  
 Ideal Stencil Mch. Co., 113 Ideal Bldg., Belleville, Ill.  
 Marsh Stencil Mch. Co., 100 Marsh Bldg., Belleville, Ill.  
 Matthews & Co., James H., 2572 Forbes Field, Pittsburgh, Pa.  
 United Autograph Register, 2316 W. 43rd St., Chicago, Ill.



## The BRADLEY

The Latest and Best Circular  
 Stencil Cutting Machine  
 Ever Produced

Four models, to cut  $\frac{1}{8}$ ",  $\frac{3}{16}$ ",  
 $\frac{1}{4}$ " and  $\frac{1}{2}$ " Letters. See last  
 month's issue for illustration of  
 Horizontal Machine.

Drop Forged Steel Punches  
 All Parts Interchangeable.  
 Machines Sent on Trial

Write for prices on Stencil Machines  
 and on Stencil Paper, Pots and Ink.  
 The Bradley Ball Marking Pot is the  
 Best. Our Oil Board and Inks are  
 unexcelled.

**A. J. BRADLEY MFG. CO.**  
 101 BEEKMAN ST. NEW YORK



## TARPAULINS

Astrup Co., 2937 W. 25th St., Cleveland, Ohio.  
 Atlanta Tent & Awning Co., Atlanta, Ga.  
 Baker-Lockwood Mfg. Co., 618 Delaware St., Kansas City, Mo.  
 Bethlehem Shipbuilding Corp., Ltd., Bethlehem, Pa.  
 Boyle & Co., Inc., John, 112 Duane St., New York, N. Y.  
 Brooke Tarpsulin Co., 429 Celeste St., New Orleans, La.  
 Brooklyn Bag Mfg. Co., 728 Atlantic Ave., Brooklyn, N. Y.  
 Buckeye Tent & Awning Mfg. Co., 264 Spruce St., Columbus, Ohio.  
 Carnie-Gouldie Mfg. Co., 22nd & Grand Ave., Kansas City, Mo.  
 Carpenter & Co., Geo. B., 440 N. Wells St., Chicago, Ill.  
 Channon Co., H., 149 N. Market St., Chicago, Ill.  
 Clifton Mfg. Co., Waco, Texas.  
 Couch Bros. Mfg. Co., Atlanta, Ga.  
 Dafeo Eustice Co., 4042 W. Jefferson St., Detroit, Mich.  
 Des Moines Tent & Awning Co., 913 Walnut St., Des Moines, Iowa.  
**Donnelly, Son & Putnam, 23 Lispenard St., New York, N. Y.**  
 (See advertisement elsewhere in this issue.)  
 Driver Bros., Inc., 500 So. Green St., Congress St., Chicago, Ill.  
**Fulton Bag & Cotton Mills, Atlanta, Ga.**  
 (See advertisement elsewhere in this issue.)  
 Goss Co., J. C., Woodbridge & Bates Sts., Detroit, Mich.  
 Heath & Son, E. F., 225 Warren St., Newark, N. J.  
 Hettrick Mfg. Co., Summit & Magnolia St., Toledo, Ohio.  
 Hoegee Co., Inc., W. H., 138 S. Main St., Los Angeles, Cal.  
 Hooper & Sons Co., Wm. E., 3502 Parkdale St., Baltimore, Md.  
 Humphry's Sons, R. A., 1020 Callowhill St., Philadelphia, Pa.  
 Iden Co., Wm. A., 564 Washington Blvd., Chicago, Ill.  
 Jacksonville Tent & Awning Co., Jacksonville, Fla.  
 Landers Bros. Co., 837 Buckingham St., Toledo, Ohio.  
 Lehon Co., 411 Oakley Ave., Chicago, Ill.  
 Pittsburgh Waterproof Co., 435 Liberty Ave., Pittsburgh, Pa.  
**Reach Textile Co., A. L., 222 E. 42nd St., New York, N. Y.**  
 (See advertisement elsewhere in this issue.)  
 Seattle Tent & Awning Co., Postal Telegraph Bldg., Seattle, Wash.  
 Smith Co., Arthur F., 139 Spring St., New York, N. Y.  
 Swanfeldt, 224 S. Main St., Los Angeles, Cal.  
 T. S. Tent & Awning Co., 707 N. Sangamon St., Chicago, Ill.  
 Upson-Walton Co., 1286 W. 11th St., Cleveland, Ohio.  
 Valley Mills, LaGrange, Ga.  
 Wenzel Tent & Duck Co., Herman, 1935 Paul St., St. Louis, Mo.  
 Wheeling Tent & Awning Co., Wheeling, W. Va.  
 Wyandotte Awning & Tent Co., Kansas City, Kan.

## TRACTORS, INDUSTRIAL

Atlas Car & Mfg. Co., 1100 Ivanhoe Rd., Cleveland, Ohio.  
 Automatic Transportation Co., Inc., 2935 Main St., Buffalo, N. Y.  
 Baker Co., R. & L., 2155 W. 25th St., Cleveland, Ohio.  
 Barrett-Cravens Co., 1328 W. Monroe St., Chicago, Ill.  
 Case Threshing Co., J. L., Racine, Wis.  
 Caterpillar Tractor Co., San Leandro, Cal.  
 Clark Truck Tractor Co., Buchanan, Mich.  
 Cleveland Tractor Co., Lamb & Euclid Aves., Cleveland, Ohio.  
 Crescent Truck Co., 160 N. 10th St., Lebanon, Pa.  
 Elwell-Parker Elec. Co., 4000 St. Clair Ave., Cleveland, Ohio.  
 Kilbourne & Jacobs Co., Columbus, Ohio.  
 Lakewood Eng. Co., Berea Road, Cleveland, Ohio.  
 Mercury Mfg. Co., 4130 S. Halsted St., Chicago, Ill.  
 Monarch Tractors, Inc., Watertown, Wis.  
 Omaha Steel Works, Omaha, Neb.  
 Prescott Co., Sumner K., 1 W. Lander St., Seattle, Wash.  
 Stuebing-Cowan Co., 311 E. Court St., Cincinnati, Ohio.  
 Townmotor Co., Cleveland, Ohio.  
 Tractor Co., J. T., 179th & St. Clair Ave., Cleveland, Ohio.  
 Yale & Towne Mfg. Co., Stamford, Conn.  
 Yuba Mfg. Co., San Francisco, Cal.

Why should a man Prosperity Expect,  
 If, to secure it, he the means neglect?  
 As Soil—its own to hold—needs fertilizing,  
 So Business—new or old—needs Advertising.

"Pop."

WHEN WRITING ADVERTISERS MENTION DISTRIBUTION AND WAREHOUSING

## TRAILERS

Fruehauf Trailer Co., 10940 Harper Ave., Detroit, Mich.  
**Highway Trailer Co., Edgerton, Wis.**  
 Kilbourne & Jacobs Mfg. div. of Case Crane & Engineering Co., Columbus, Ohio.  
 Lapeer Trailer Co., Lapeer, Mich.  
 Lee Trailer & Body Co., 2343 S. LaSalle St., Chicago, Ill.  
 Shadbolt Mfg. Co., Flushing Ave. & Cumberland St., Brooklyn, N. Y.  
 Trailmobile Co., 31st & Robertson Sts., Cincinnati, Ohio.

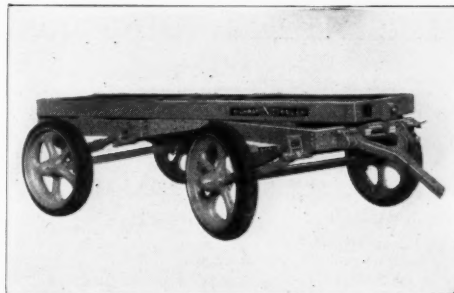
## HIGHWAY FOUR-WHEEL TRAILER

MODEL XC-209  
 4-TON CAPACITY

**\$750**

F. O. B. FACTORY

Saves the Price of a 5-Ton Truck  
 REDUCES HAULING COST 50%



MODEL XC-206  
 6-TON CAPACITY

**\$1050**

F. O. B. FACTORY

Write for Literature and Detailed Specifications

**HIGHWAY TRAILER CO.**  
 EDGERTON, WIS.

## TRAILERS, INDUSTRIAL TRUCK

Arcadia Trailer Co., Newark, N. Y.  
 Automatic Transportation Co., 2935 Main St., Buffalo, N. Y.  
 Biehl Iron Works, Inc., Reading, Pa.  
 Clark Co., Geo. P., 10 Canal St., Windsor Locks, Conn.  
 Koppel Industrial Car & Equip. Co., Koppel, Pa.  
 Crescent Truck Co., 160 N. 10th St., Lebanon, Pa.  
 Eddie Trailer Corp., 191 Ninth Ave., New York, N. Y.  
 Electric Wheel Co., Walton Heights, Quincy, Ill.  
 Equipment Mfg. Co., 1848 E. 6th St., Cleveland, Ohio.  
 Fairbanks Co., 416 Broome St., New York, N. Y.  
 Hercules Trailer Mfg. Co., 1327 Sante Fe Ave., Los Angeles, Cal.  
 Howe Cahn Co., Muskegon, Mich.  
 Koenig & Co., Edward L., 569 West Lake St., Chicago, Ill.  
 Lakewood Eng. Co., Berea Rd., Cleveland, Ohio.  
 Lansing Co., 602 Cedar St., Lansing, Mich.  
 Lyon Iron Works, Inc., Greene, N. Y.  
 Menasha Wood Split Pulley Co., Menasha, Wis.  
 Mercury Mfg. Co., 4130 S. Halsted St., Chicago, Ill.  
 Michigan Truck & Lumber Co., c/o Bartlett Lumber Co., 1600 E. Davidson St., Detroit, Mich.  
**Nutting Truck Co., Faribault, Minn.** (See advertisement elsewhere in this issue.)  
 Omaha Steel Works, Omaha, Neb.  
 Streich & Bro. Co., A., Oshkosh, Wis.  
 Warren Mfg. Co., Springfield, Mass.  
 Welded Prod. Mfg. Co., 851 Kinnickinnick Ave., Milwaukee, Wis.  
 West Bend Equip. Co., West Bend, Wis.  
 Whitehead & Kales Co., 2361 Beecher Ave., Detroit, Mich.  
 Yale & Towne Mfg. Co., Stamford, Conn.  
 Zering Mfg. Co., H., Brownway & Railroad Sts., Oakley, Cincinnati, Ohio.

## TRUCKS, HAND

Aeromotor Co., 2500 W. Roosevelt Rd., Chicago, Ill.  
 Anchor Post Iron Works, 50 Church St., New York, N. Y.  
 Backus, Jr., A., & Sons, 1540 Lafayette Blvd., Detroit, Mich.  
 Baltimore Cooperage Co., Ostend & Creek Sts., Baltimore, Md.  
 Barrett-Cravens Co., 1328 W. Monroe St., Chicago, Ill.  
 Buss Machine Works, Holland, Mich.  
 Chase Foundry & Mfg. Co., 2800 Parsons Ave., Columbus, Ohio.  
 Chicago Scale Co., 7740 S. Chicago Ave., Chicago, Ill.  
 Clark Co., Geo. P., 10 Canal St., Windsor Locks, Conn.  
 Cleveland Wire Spring Co., 1283 E. 38th St., N. E., Cleveland, Ohio.  
 Colson Co., Elyria, Ohio.

## TRUCKS, HAND (Continued)

Conkey & Co., H. D., Mandota, Ill.  
 Diamond State Fibre Co., East Bridgeport, Pa.  
 Electric Wheel Co., Walton Heights, Quincy, Ill.  
 Equipment Mfg. Co., 1848 E. 6th St., Cleveland, Ohio.  
 Fairbanks Co., 416 Broome St., New York, N. Y.  
 Fairbanks Morse & Co., 900 S. Wabash Ave., Chicago, Ill.  
 Fibrebone Co., Inc., Waltham, Mass.  
 Francis Co., Chas. E., Rushville, Ind.  
 Globe Vise & Truck Co., 1451 Front St., N. W., Grand Rapids, Mich.  
 Grand Rapids Foundry Co., Grand Rapids, Mich.  
 Grand Rapids Hand Screw Co., Grand Rapids, Mich.  
 Hamilton Caster & Mfg. Co., Hamilton, Ohio.  
**Heerlein Furn. Hand Truck Co., 92 Washington Ave., Long Island City, N. Y.**  
 Howe Chain Co., 110 Clay Ave., E., Muskegon, Mich.  
 Howe Scale Co., Rutland, Vt.  
 Hughes Steel Equip. Co., Allegan, Mich.  
 Illinois Iron & Bolt Co., Carpentersville, Ill.  
 Kilbourne & Jacobs Mfg. Co., Columbus, Ohio.  
 Koenig & Co., Edward L., 569 West Lake St., Chicago, Ill.  
 Koven & Bro., Inc., L. O., Olden & Koven Aves., Jersey City, N. J.  
 Lakewood Eng. Co., Berea Rd., Cleveland, Ohio.  
 Lansing Co., Lansing, Mich.  
 Leatheroid Mfg. Co., Kennebunk, Maine.

## Twenty Hand Trucks in One—

## The Heerlein Adjustable Hand Truck

## Saves Damage Claims in Furniture Warehouses

This truck will save time and money in any warehouse because the adjustable feature makes a battery of trucks unnecessary. It can be adjusted to fit the load. Don't risk handling difficult trucking jobs with an ordinary truck.

Built to last under the hardest service you can give it. The price is only \$39.75, and it's well worth the money. One man with it can do the work of four without.

The Heerlein Adjustable Hand Truck Co.  
 92 Washington Ave., Long Island City, N. Y.

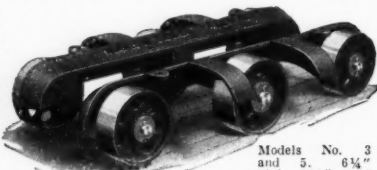
# MARION Dolly Trucks

## Move Your Stock Easily

You can move the heaviest rolls easily, safely and quickly! Marion Dolly Trucks cost no more than ordinary Dollys, but embody many new and exclusive advantages. Built low and with sloping skids; easy to load and unload; frame curved to hold rolls of paper and barrels firmly in place. Will turn in their own length; will handle up to 2½ tons right along. Simple and light enough to be carried anywhere needed, yet durable and practically indestructible. Made of steel and Marion certified malleable.

(High-Wheel Models best for rough floors and inclines. Low-Wheel Models, Nos. 1 and 2, best for smooth floors. Only 3" high, 17" and 20" widths.)

Marion Dollys "stay put" while being loaded; won't crawl away from you. Heavy rolls can be loaded or unloaded without jarring, tearing or bursting.



Models No. 3 and 5, 6½" high, 20" and 25" widths.

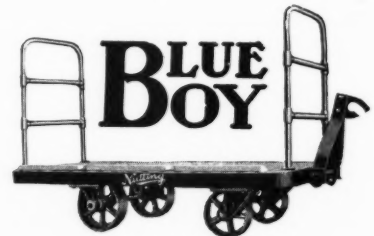
Your savings in stock and manpower will make it cheaper for you to own Marion Dollys than to try to skimp along without them. Write today for complete information, prices and special 10-day trial offer No. 99.

**MARION TOOL WORKS, INC.**  
 Marion, Indiana

Lewis Co., G. B., Watertown, Wis.  
 Lewis-Shepard Co., 117 Walnut St., Watertown Sta., Boston, Mass.  
 Loudon Mch. Co., 1115 Broadway, Fairfield, Iowa.  
 Lyon Iron Works, Inc., Greene, N. Y.  
 McFarlane & Co., Inc., H., 322 S. Grand St., Chicago, Ill.  
 McKinney Mfg. Co., Liverpool & Metropolitan Sts., Pittsburgh, Pa.  
**Marion Tool Works, Marion, Ind.**  
 Mercury Mfg. Co., 4130 S. Halsted St., Chicago, Ill.  
 National Scale Corp., 25 Ware St., Chicopee Falls, Mass.  
 National Vulcanized Fibre Co., East Wilmington, Del.  
 New Britain Mch. Co., 140 Chestnut St., New Britain, Conn.  
**Nutting Truck Co., Faribault, Minn.**  
 Ohio Galvanizing & Mfg. Co., Niles, Ohio.  
 Plimpton Lift Truck Corp., 10 Elm Court, Stamford, Conn.  
 Revolver Co., 336 Garfield Ave., Jersey City, N. J.  
 Rogers Fibre Co., 125 Beach St., Boston, Mass.  
 Ross Carrier Co., Benton Harbor, Mich.  
 Seaman Paper Co., 360 No. Michigan Ave., Chicago, Ill.  
**Self Lifting Piano Truck Co., Findlay, Ohio. (See advertisement elsewhere in this issue.)**  
 Sheffield Car Co., Three Rivers, Mich.  
 Standard Scale & Supply Corp., 1629 Liberty Ave., Pittsburgh, Pa.  
 Sterling Wheelbarrow Co., 6300 Pullen St., West Allis, Milwaukee, Wis.  
 Stuebing-Cowan Co., 311 E. Court St., Cincinnati, Ohio.  
 Streich & Bro. Co., A., Oshkosh, Wis.  
 Towsley Mfg. Co., John J., Cincinnati, Ohio.  
 Transmission Ball Bearing Co., Inc., 1053 Military Rd., Buffalo, N. Y.  
 Tucker & Dorsey Mfg. Co., S. State & Bates Sts., Indianapolis, Ind.  
 Warren Mfg. Co., Springfield, Mass.  
 Warsaw Elevator Co., 216 Fulton St., Warsaw, N. Y.  
 West Bend Equip. Co., West Bend, Wis.  
 Western Wheelbarrow Mfg. Co., So. Fort Smith, Ark.  
 Whitehurst Mfg. Corp., R. W., Norfolk, Va.  
 Yale & Towne Mfg. Co., Stamford, Conn.  
 Zering Mfg. Co., H., Brownway & Railroad St., Oakley, Cincinnati, Ohio.

## Nutting

"The Trailer that Leads"



## One Piece Steel Frame

This strong, rigid trailer not only holds big, heavy loads but is built for many years of use. Write for detailed information.

**NUTTING TRUCK CO.**  
 1651 Division St.  
 Faribault, Minn.



## TRUCKS, INDUSTRIAL

Anchor Post Iron Works, 52 Church St., New York, N. Y.  
 Atlas Car & Mfg. Co., 1100 Ivanhoe Rd., Cleveland, Ohio.  
 Automatic Transportation Co., Inc., 2935 Main St., Buffalo, N. Y.  
 Baker Co., R. & L., 2185 W. 25th St., Cleveland, Ohio.  
 Buda Co., Harvey, Ill.  
 Clark Tractor Co., Buchanan, Mich.  
 Crescent Truck Co., 160 No. 10th St., Lebanon, Pa.  
 Electric Wheel Co., Walton Heights, Quincy, Ill.  
 Elwell-Parker Elec. Co., 4000 St. Clair Ave., Cleveland, Ohio.  
 Fairbanks Co., 416 Broome St., New York, N. Y.  
 Howe Chain Co., 110 Clay Ave., E., Muskegon, Mich.  
 Kent Machine Co., Kent, Ohio.  
 Koppel Industrial Car & Equip. Co., Koppel, Pa.  
 Ladel Mfg. Co., New Philadelphia, Ohio.  
 Lakewood Eng. Co., Berea Rd., Cleveland, Ohio.  
 Lyon Iron Works, Inc., Greene, N. Y.  
 Market Forge Co., Everett, Mass.  
 Mercury Mfg. Co., 4130 S. Halsted St., Chicago, Ill.  
 Miami Mfg. Co., Peru, Ind.  
 New Britain Mch. Co., 140 Chestnut St., New Britain, Conn.  
 Ottumwa Iron Works, Inc., Ottumwa, Iowa.  
 Peerless Wire Goods Co., 2910 Ferry St., Lafayette, Ind.  
 Plimpton Lift Truck Corp., 10 Elm Court, Stamford, Conn.

WHEN WRITING ADVERTISERS MENTION DISTRIBUTION AND WAREHOUSING



## TRUCKS, TIERING

Alvey Ferguson Co., 70 North Ave., Cincinnati, Ohio.  
 Anderson Elec. Car Co., Detroit, Mich.  
 Atlas Car & Mfg. Co., Cleveland, Ohio.  
 Automatic Trans. Co., 2959 Main St., Buffalo, N. Y.  
 Baker R & L Co., 2185 W. 25th St., Cleveland, Ohio.  
 Barrett-Cravens Co., 1328 W. Monroe St., Chicago, Ill.  
 Chase Foundry & Mfg. Co., 2800 Parsons Ave., Columbus, Ohio.  
 Clark Co., Geo. P., 10 Canal St., Windsor Locks, Conn.  
 Conkey & Co., H. D., Mendota, Ill.  
 Couple Gear Elec. Truck Co., Grand Rapids, Mich.  
 Crescent Truck Co., 160 N. 10th St., Lebanon, Pa.  
 Diamond State Fibre Co., East Bridgeport, Pa.  
 Economy Eng. Co., 2631 W. Van Buren St., Chicago, Ill.  
 Ellwell-Parker Elec. Co., 200 St. Clair Ave., Cleveland, Ohio.  
 Grand Rapids Vapor Kiln, Grand Rapids, Mich.  
 Hydraulic Press Mfg. Co., 83 Lincoln Ave., Mt. Gilead, Ohio.  
 Lakewood Eng. Co., Cleveland, Ohio.  
 Lutz Co., Inc., Morris & Bamberg Sts., Philadelphia, Pa.  
 Mercury Mfg. Co., 4130 Palsted St., Chicago, Ill.  
 National Scale Corp., 25 Ware St., Chicopee Falls, Mass.  
 New Jersey Fdry. & Mch. Co., 90 West St., New York, N. Y.  
 Pilington Lift Truck Corp., 10 Elm Court, Stamford, Conn.  
 Puffer, Hubbard Mfg. Co., 32nd Ave. So., cor. E. 26th St., Minneapolis, Minn.  
 Revolver Co., 336 Garfield Ave., Jersey City, N. J.  
 Ross Carrier Co., Benton Harbor, Mich.  
 Service Caster & Truck Co., Albion, Mich.  
 Lewis-Shepard Co., 117 Walnut St., Watertown Sta., Boston, Mass.  
 Standard Conveyor Co., 315 Second Ave. N. W., No. St. Paul, Minn.  
 Stuebeling-Cowan Co., 311 E. Court St., Cincinnati, Ohio.  
 Terminal Eng. Co., Inc., 17 Battery Pl., New York, N. Y.  
 Union Steel Prod. Co., 132 N. Berrien St., Albion, Mich.  
 Yale & Towne Mfg. Co., Stamford, Conn.

## TRUCK TRANSMISSIONS

Warford Corp., 44 Whitehall St., New York, N. Y.

## WHEELS

Budd Wheel Co., 25th & Hunting Park Ave., Philadelphia, Pa.  
 (See advertisement elsewhere in this issue.)  
 Morand Cushion Wheel Co., 618 S. May St., Chicago, Ill.  
 Sewell Cushion Wheel Co., 6468 Gratiot St., Detroit, Mich.

## WORK SUITS

Arbuthnot-Stevenson Co., 801 Penn Ave., Pittsburgh, Pa.  
 Automotive Garment Co., Kansas City, Mo.  
 Brownstein-Lewis Co., 741 So. Figueroa St., Los Angeles, Cal.  
 Burnham, Munger, Root Dry Goods Co., 8th & Broadway, Kansas City, Mo.  
 Farhart-Hamilton Cotton Mills, Michigan Ave. & Kent St., Detroit, Mich.  
 Cohn, Goldwater Co., 216 So. Los Angeles St., Los Angeles, Cal.  
 Cowden Mfg. Co., 412 W. 8th St., Kansas City, Mo.  
 Crown Overall Mfg. Co., 3rd & Plum Sts., Cincinnati, Ohio.  
 Eftymson & Wolf, 360 W. Washington St., Indianapolis, Ind.  
 Elder Mfg. Co., 13th & Lucas Sts., St. Louis, Mo.  
 Finch, Van Slyke & McConville, Park Square, St. Paul, Minn.  
 Finck & Co., W. M., 3708 Gratiot Ave., Detroit, Mich.  
 Fleishner, Mayer & Co., Portland, Ore.  
 Globe Superior Corp., Abingdon, Ill.  
 Goll & Frank Co., East Water & Buffalo Sts., Milwaukee, Wis.  
 Greenbaum, Weil & Michels, 742 Mission St., San Francisco, Cal.  
 Hanke Bros., Main & 12th Sts., Cincinnati, Ohio.  
 Hettrick Mfg. Co., Summitt & Magnolia Sts., Toledo, Ohio.  
 Hirsch-Weis Mfg. Co., Portland, Ore.  
 Lamb Mfg. Co., 1301 Wabash Ave., Terre Haute, Ind.  
 Larned-Carter & Co., 1210 Eighth St., Detroit, Mich.  
 Lee Co., H. D., 20th & Wyandotte Sts., Kansas City, Mo.  
 Lindeke, Warner & Son, St. Paul, Minn.  
 McDonald Mfg. Co., R. L., St. Joseph, Mo.  
 Miller & Co., Inc., E. B., Chattanooga, Tenn.  
 Miller Mfg. Co., Paris, Texas.  
 Miller Mfg. Co., C. R., Dallas, Texas.  
**Motor Suit Mfg. Co., 710 Central St., Kansas City, Mo.**  
 Nunnally & McCrea Co., Atlanta, Ga.  
 Oberman Mfg. Co., D. M., Jefferson City, Mo.  
 Oppenheimer & Co., M., 938 Penn St., Pittsburgh, Pa.  
 Phoenix Mfg. Co., 201 So. Sharp St., Baltimore, Md.  
 Pierson Mfg. Co., Quincy, Ill.  
 Pittsburgh Dry Goods Co., 933 Pennsylvania Ave., Pittsburgh, Pa.  
 Protetall Co., Abingdon, Ill.  
 Ranney-Davis Merc. Co., Arkansas City, Kans.  
 Ed Diamond Clothing Co., 801 Lucas St., St. Louis, Mo.  
 Rice-Stix Co., 16th & Washington Ave., St. Louis, Mo.  
 Richardson Dry Goods Co., St. Joseph, Mo.  
 Rockford Overall Mfg. Co., Rockford, Ill.  
 Sanger Brothers, Dallas, Texas.  
 Scott Mfg. Co., Cyrus W., Houston, Texas.  
 Scowcroft & Sons Co., John, Ogden, Utah.  
 Sibbett Mfg. Co., Oakland, Cal.  
 Signal Shirt Co., Racine, Wis.  
 Smith-McFord-Townsend Dry Goods Co., 8th & Broadway, Kansas City, Mo.  
 Spokane Dry Goods Co., Spokane, Wash.  
 Standard Tent & Awning Co., Cor. Michigan & Orange Sts., Toledo, Ohio.  
 Strauss Bros., 109 Hopkins Pl., Baltimore, Md.  
 Strauss, Levi & Co., Battery & Pine Sts., San Francisco, Cal.  
 Stuart, Keith & Co., Fayette & Greene Sts., Baltimore, Md.  
 Sweet, Orr & Co., 15 Union Square, New York, N. Y.  
 Union Special Overall Co., Plume & 14th St., Cincinnati, Ohio.  
 Volunteer Mfg. Co., Nashville, Tenn.  
 Welch-Cook-Beals Co., Cedar Rapids, Iowa.  
 Wheeler & Motter Merc. Co., 7th & Sylvania Sts., St. Joseph, Mo.  
 Wyman-Partridge & Co., 4th St. & 1st Ave. No., Minneapolis, Minn.  
 Zions' Co-oper. Merc. Institution, Salt Lake City, Utah.

## ALLOVA WORK SUITS

With each twelve suits or coats ordered we include one extra suit or coat—no charge

Buy Uniforms at Wholesale Cost!  
 Sell Them to Your Men at a Saving—

Warehouse, storage, and transfer men look best in uniform. They advertise your business, and give the public confidence in your institution. Many house robberies have been committed by burglars who pose as "movers," and who slip in unnoticed with a crew of transfer men who are not in uniform. Such an occurrence means lost business and endangered prestige for the warehouse concern. You can avoid this loss by putting your men in uniform.

"Allova" Work Suits solve the problem of outfitting your men at low cost. These sturdy, good-looking, one-piece suits wear long and well. Made of first quality materials. Cut big and roomy. Every seam stitched to stay. Pockets reinforced with double thickness of material. All buttons covered. Made in solid blue, khaki, or blue and white striped and blue and khaki striped. Sizes 34 to 50. Ten per cent additional for sizes 46 to 50.

We embroider your name or trade-mark in fast colors for 25c per garment. Choice of red, blue, white or black. You are safe ordering direct from this advertisement. Satisfaction guaranteed. Be sure to state sizes wanted.

Sample Suit on Approval: Know the real value of "Allova" Work Suits. Let us send you a sample suit on approval. State size wanted and enclose your firm name or trade-mark. If not perfectly satisfactory, return suit at our expense.

Order a sample suit today.

## MOTOR SUIT COMPANY, DEPT. 56

701 Central St., Kansas City, Mo. 327 So. Market St., Chicago, Ill.



3 Suits .....	\$3.25 each
12 Suits .....	3.00 each
25 Suits .....	2.88 each
50 Suits .....	2.75 each

With each twelve suits or coats ordered, we include one extra suit or coat—no charge.

## Nobody Pays for It

Nobody pays for the time and labor saving machine which cuts down the warehouseman's overhead and increases his handling capacity—it pays for itself.

Nobody pays for the motor truck which builds business and increases distribution efficiency—it pays for itself.

Nobody pays for the advertising which cuts down selling cost and puts business on a quantity basis—it pays for itself.

—With credit to Campbell's Current.

## CLASSIFIED ADVERTISING

### Mr. Warehouseman— What Have You That You Want to Sell and What Is It You Want to Buy?

This department of Distribution & Warehousing is designed for your use, to sell or to buy, anything and everything, that can be sold to or bought from other warehousemen and manufacturers that use this publication.

### INFORMATION

**Six cents a word** is the rate for all undisplaced advertisements set solid, regular want ad style; all capitals, 9c. a word; all capitals leaded, 12c. a word; minimum charge \$1 an insertion; payable in advance (see next paragraph).

**Ten per cent discount** if one payment is made in advance for four or more consecutive insertions. Advertisements other than "Positions Wanted" will be billed monthly if run more than four times.

**Add five words** for address if replies are to come to a box number address at any of our offices. These replies are forwarded each day as received, in new envelope, at no extra charge.

**Refund will be made** if all insertions ordered are not needed, the amount refunded being the difference between cost of insertions given and full amount paid.

**Telephone orders** must be confirmed in writing same day. No allowances can be made for errors of any kind unless prompt notification is sent us.

**When replying** to blind ads be careful to put on your envelope the correct box number and do not enclose original letters of recommendation—send copies.

**The right is reserved** to refuse any advertisement and also to re-write and edit copy furnished whenever the publishers consider it advisable to do this.

**Classified Department**  
**Distribution and Warehousing Publications, Inc.**  
**249 W. 39th St., New York**

**SLIGHTLY USED CANVAS COVERS** for sale. Plain and waterproofed. Write for prices stating approximate size wanted. The Hettrick Mfg. Co., Toledo, Ohio.

**WAREHOUSE EXECUTIVE** with fifteen years' experience in the general and cold storage warehouse field is now open for a position as warehouse manager or superintendent. Will gladly furnish best of references and full particulars. Please reply to Box 7010, c/o DISTRIBUTION & WAREHOUSING.

**FOR SALE**—Storage and transfer business in Oklahoma City, Okla. Established since 1909. One brick building for merchandise and household goods. One galvanized iron building for oil and heavy machinery. Both adjoining, situated on trackage. Motor vans and truck equipment. Apply R-123, care Distribution and Warehousing.

## INDEX TO GENERAL ADVERTISERS

The Advertisers' Index is published as a convenience, and not as a part of the advertising contract. Every care will be taken to index correctly. No allowance will be made for errors or failure to insert.

<b>A</b>	
Arco Vacuum Corp. ....	4
Autocar Company .....	67
<b>B</b>	
Big 4 Transfer Co., Inc. ....	152
Bradley Mfg. Co., A. J. ....	147
Breen, Wm. H. ....	146
Budd Wheel Co. ....	5
<b>C</b>	
Chicago Quilt Mfg. Co. ....	144
City of Atlanta .....	154
Classified Advertising .....	150
<b>D</b>	
Donnelly, Son & Putnam .....	144
DuPre Mfg. Co. ....	143
<b>E</b>	
Excelsior Wrapper Co. ....	144
<b>F</b>	
Federal Motor Truck Co. ....	Front Cover
Fulton Bag & Cotton Mills, Inc. ....	144
Flanders Hotel .....	151
<b>G</b>	
General Motors Truck Co. ....	77
Graham Bros. ....	152
<b>H</b>	
Heerlein Adjustable Hand Truck Co. ....	148
Highway Trailer Co. ....	147
<b>I</b>	
International Harvester Co. ....	73
<b>J</b>	
Judson Freight Fwdg. Co. ....	3
<b>K</b>	
Kelly-Springfield Tire Co. ....	71
Kingsley, George S. ....	2
<b>L</b>	
Louisville Bedding Co. ....	Third Cover
<b>M</b>	
Maish Co., Chas. A. ....	145
Marion Tool Works .....	148
Mohawk Rubber Co. ....	153
Moore & Dunford, Inc. ....	78
Motor Suit Mfg. Co. ....	149
<b>N</b>	
National Terminals Corp. ....	Second Cover
Nutting Truck Co. ....	148
<b>O</b>	
Onan & Sons, D. W. ....	146
<b>P</b>	
Peelle Company .....	6
Pennsylvania Hotel .....	152
<b>R</b>	
Reach Textile Co., Inc., A. L. ....	145
Republic Motor Truck Co. ....	Back Cover
Ruggles Motor Truck Co. ....	69
Richards-Wilcox Mfg. Co. ....	65
Selden Truck Corp. ....	75
Self Lifting Piano Truck Co. ....	146
Selle & Co., H. W. ....	144
<b>T</b>	
Trans-Continental Freight Co. ....	1
<b>U</b>	
United Vacuum Appliance Corp. ....	141
<b>V</b>	
Vulcan Car Rail & Const. Co. ....	142
<b>W</b>	
Walker Vehicle .....	151
White Tar Co. ....	143

(For Shippers Index to Advertisers, see pages 151, 152 and 153)

# SHIPPERS INDEX

(For Index to General Advertisers, see page 150)

The Advertisers' Index is published as a convenience, and not as a part of the advertising contract. Every care will be taken to index correctly. No allowance will be made for errors or failure to insert.

<b>A</b>	
A B C Fireproof Ws. Co.	109
A B C Storage & Moving Co.	136
A B C Storage Co.	137
Aberdeen Storage Co.	135
Adams Transfer & Storage Co.	110
Alabama Motor Transfer Co.	80
Albany Term. & Sec. Ws. Co.	115
Alexandria Chamber of Commerce	137
Amick Transfer & Storage Co.	81
Anchor Warehouse Co.	115
Anderson's Express & Stge.	112
Arizona Stge. & Dist. Co.	80
Arrow Ppf. Stge. & Moving Co.	110
Atlantic States Ws. & Cold Stge. Co.	103
Atlantic Stge. & Ws. Inc.	100
Atlas Storage & Warehouse Co.	132
Auburn Draying Co. Inc.	116
Audubon Ppf. Stge. Whses.	119
<b>B</b>	
B. R. & P. Warehouse Co.	123
Baer Fireproof Warehouse Co.	90
Baier Trans. & Stge. Co.	104
Baillargon Express, Ltd., J. B.	110
Ballard Storage & Warehouse Co.	109
Baltimore Storage Co.	100
Bartlett Storage Warehouse.	95
Bauermeister Terminal Co.	97
Beaufort County Stge. Ws. Co.	125
Beeler Trans. & Stge. Co.	95
Bekins Household Shipping Co.	90
Bekins Omaha Van & Stge. Co.	111
Bekins Van & Stge. Co. (Pismo)	81
Bekins Van & Stge. Co. (Hollywood)	81
Bekins Van & Stge. Co. (Los Angeles)	82
Bekins Van & Stge. Co. (Oakland)	83
Bekins Van & Stge. Co. (Portland, Ore.)	130
Bekins Van & Stge. Co. (Sacramento)	83
Bekins Van & Stge. Co. (San Francisco)	84
Bekins Van & Stge. Co. (Seattle)	138
Bekins Van & Stge. Co. (Sioux City)	98
Bekins Van & Stge. Co. (Tacoma)	138
Bekins Van & Stge. Co. (Vancouver)	129
Berthelsen Transfer & Stge. Co.	98
Bertz & Co., S. S.	131
Bill Brothers Co.	86
Bilberg Sons, Jos.	118
Binyon-O'Keefe Ppf. Stge. Co.	136
Birch-Smith Ppf. Stge. Co.	81
Blackham Stge. & Trucking Co. Inc.	118
Blanchard Storage Co. Inc.	123
Blanch's Stge. & Stge. Co.	133
Blue Line Storage Co.	98
Bond Ppf. Stge. Co., E. M.	136
Booth Brothers	107
Borgmann & Son, A. C.	95
Borley Stge. & Trans. Co.	111
Boulton's Storage	139
Bowler, Inc., Geo. A.	104
Bowling Storage & Sales Co.	103
Bowman Co., Chas. E.	116
Boyd Trans. & Stge. Co.	108
Brady & Son Co., P.	119
Broad St. Ws. Corp.	121
Broadway Storage Co. (R. E.)	124
Broadway Storage Ws. (N. Y.)	119
Brokers Office & Ws. Co.	99
Brunton Trans. & Stge. Co.	90
Buffalo Stge. & Carting Co.	117
<b>C</b>	
Cady Moving & Stge. Co.	134
California Truck Co.	82
Calkins & Co., James	113
Cameron Trans. & Stge. Co.	108
Camp-Daniel Trans. & Stge. Co. Inc.	89
Campbell's Storage	123
Canton Storage Co.	125
Capital City Trans. Co.	137
Carey Trans. & Stge. Co. Inc.	134
Carman Ppf. Stge. Ws. Inc.	119
Carnahan Transfer & Storage.	132
Carolina Stge. & Dist. Co.	125
Carolina Trans. & Stge. Co.	125
Carpenter Storage, Inc.	124
Cathcart Van & Stge. Co.	89
Cedar Rapids Trans. & Stge. Co.	97
<b>D</b>	
D & D Trans. & Stge. Co.	96
Daggett Trans. & Stge. Co.	98
Daniel Stge. Co., R. L.	136
Danville Trans. & Stge. Co.	94
Davidson Trans. & Stge. Co.	101
Day & Meyer, Munn & Young. Inc.	120
Delaware Trucking Co.	96
Delcher Bros. Stge. Co.	87
Dependable Truck & Stge. Co.	129
Detroit Railway & Harbor Term. Co.	104
Detroit Storage Co.	104
Devey & Co., George E.	85
Diehl Stge. Ws. Co.	130
Dietrich, Jacob	112
Dietz Stge. Ws.	125
Dobson Stge. Ws.	124
Dorchester Ppf. Stge. Ws.	102
Dorney Stge. Ws. Co., C. A.	130
Drinkwater's Sons, Inc., Harry G.	85
Driscoll's Cartage	140
Driver Storage Co.	81
Duluth Van & Stge. Co.	107
Dunham & Reil, Inc.	120
Dunn Co., D. W.	102
Dye Ppf. Stge. Co., Fred F.	117
<b>E</b>	
Edgars Sugar House	104
Edwards Trans. & Stge. Co.	128
Eldredge Exp. & Stge. Ws. Co.	112
Electric Trans. & Stge. Co.	82
Elgin Stge. & Trans. Co.	94
Elkin Trans. & Stge. Co.	137
Elston Packing & Stge. Co.	107
Empire Storage Co.	91
Erie Storage & Carting Co.	121
Erie Warehouse Co., Inc.	130
Essex Ws. Co.	113
Evanson Transfer Co.	94
Ewert & Ricker Exp. & Stge. Co.	97
Eyres Stge. & Dist. Co.	138
<b>F</b>	
Central Storage Co.	110
Central Stge. & Fwdg. Co.	91
Central Stge. Ws.	103
Central Van & Stge. Co.	138
Central Ws. Co. (Baltimore)	100
Central Ws. Co. (Saginaw)	107
Central Ws. Co. (St. Paul)	100
Charleston Ws. & Fwdg. Co.	131
Charlie's Transfer Co.	80
Chattanooga Trans. & Stge. Co.	135
Chattanooga Ws. & Cold Stge. Co.	135
Chelsea Ppf. Stge. Whses., Inc.	119
Cherry Trans. & Stge. Co.	88
Chicago Van & Stge. Co.	82
Cincinnati Term. Ws. Co.	126
Cincinnati Tobacco Ws. Co.	126
City Storage, Ltd.	140
City Transfer Co., Ltd.	90
City Trans. & Stge. Co.	81
City View Apartment & Stge. Co.	125
Clancy Carting Co., J. C.	150
Classified Advertising	126
Cleveland Storage Co.	139
Coakley Bros.	96
Colum Stge. Ws. Co., Henry	117
Cold Spring Stge. Co., Inc.	117
Columbia Stge. Ws.	119
Columbian Stge. & Trans. Co.	105
Columbian Warehouse Co.	133
Colyar Van & Stge. Co.	82
Commercial Truck & Stge. Co.	138
Commercial Whses. (New Orleans)	100
Commercial Ws. Co. (Little Rock)	80
Commonwealth Ice & Cold Stge. Co.	101
Consolidated Trucking & Stge. Co.	118
Cosch & Sons, B. G.	123
Cotter Ws. Co., W. Lee	125
Cotter Ws. Co., W. Lee (Akron)	125
Cotter Ws. Co., W. Lee (Columbus)	128
Cotter Ws. Co., W. Lee (Mansfield)	129
Cotter Ws. Co., W. Lee (Toledo)	129
Coyne Stge. Ws.	135
Craftree Trans. & Stge. Co.	135
Crandall Trans. & Ws. Co.	94
Cummins Storage Co.	125
Cuneo Storage Co.	91
Currier-Lee Ws. Co.	91
Curtis Bros. Trans. Co.	128

(Continued on page 152)

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## SHIPPERS INDEX—Continued

(Continued from page 137)

<b>F</b>	
Ferriss Whse. & Stge. Co.	87
Fidelity Fpf. Stge.	82
Fidelity Storage Co.	101
Fidelity Stge. & Trans. Co.	109
Fireproof Whse. & Stge. Co.	128
Flag Stge. Whse. Co.	123
Ford Trans. & Stge. Co.	111
Forest Hills Fpf.	118
Fort Hill Stge. Whse.	192
Fort Wayne Stge. Co.	95
Franklin Fpf. Whses., Inc.	116
Fraser & Kelly	115
Fulton Trans. & Stge. Co.	89
<b>G</b>	
Galt Block Whse. Co.	100
Gardner Storage Co.	89
Geige, J. Norman	101
General Fpf. Stge. Co.	129
General Warehousing Co.	110
Gibbs Express Co.	102
Gibbs, Thomas H.	113
Gilbert Storage Co.	120
Gleason Bros.	103
Glenn & Sons, O.	117
Globe Exp. & Van Co.	91
Globe Trans. & Stge. Co.	138
Glynn's Trans. & Fpf. Stge. Co.	90
Goodman Whse. Corp.	112
Goold Storage Co.	91
Gordon Fpf. Whse. & Van Co.	111
Gramatan Whse. Inc.	116
Grand Rapids Stge. & Van Co.	106
Greensboro Whse. & Stge. Co.	125
Greig Cartage & Stge. Co.	126
Griffin, Hal	130
Griswold & Walker, Inc.	91
<b>H</b>	
Hagerstown Stge. & Trans. Co.	101
Hamman Bros.	91
Harder's Fpf. Stge. & Van Co.	92
Harragan's Stge. Whses., Inc.	116
Harris Trans. & Whse. Co.	80
Harrisburg Storage Co.	131
Hartford Despatch & Whse. Co.	86
Haslett Whse. Co.	81
Hastings Truck Co.	107
Hauch & Keenan Stge. & Trans. Co.	133
Headley's Exp. & Stge. Co.	130
Hebard Stge. Whse.	92
Herbert & Son Co. Wm.	129
Hersfield Motor Trans. Co.	86
Hess-Strickland Trans. & Stge. Co.	80
Hildenbrand Bros.	102
Hill The Mover	140
Hillier Storage Co.	95
Hille Bros. Trans. & Stge. Co.	110
Hodge Stge. & Cartage Co.	129
Hodges, Joe	130
Hollingsworth Warehouses	89
Hollywood Stge. Co. (Hollywood)	81
Hollywood Storage Co. (Los Angeles)	82
Holman & Co., Inc., Geo. B.	113
Howard Terminal	83
Hunter Trans. Co. (Ark.)	81
Hunter Trans. Co. (Texas)	137
Hutchison Bonded Warehouse	98
<b>I</b>	
Imperial Trans. & Stge. Co., Inc.	110
Independent Trans. & Stge. Co.	138
Indiana Refrigerating Co.	96
Indiana Terminal Whse. Co.	96
Interstate Terminal Whses., Inc.	127
Inter-State Trans. & Stge. Co.	98
Iowa Warehouse Co.	98
Ivory, Inc., John F.	104
<b>J</b>	
Jackson Heights Van & Exp. Co.	118
Jacobs Transfer Co.	86
Jamaica Stge. Whse. Co., Inc.	118
Jennings-Cornwall Whse. Co.	137
Johnson Stge. & Moving Co.	94
Joliet Whse. & Trans. Co.	94
Jones-Clark Trucking & Stge. Co.	124
Jones Trans. & Stge. Co.	136
Jones Whses., Inc.	134
Joyce Bros. Co.	92
<b>K</b>	
Kedney Whse. Co. (Grand Forks)	125
Kedney Whse. Co. (Minneapolis)	108
Kedney Whse. Co. (St. Paul)	109
Kelso Co., J. L.	103
<b>L</b>	
Kenna Terminal	114
Kennicott-Patterson Trans. Co.	84
Kent Storage Co.	107
Keystone Delivery Trans. & Stge.	132
Keystone Exp. & Stge. Co.	131
Kinderman & Sons, J.	120
King Storage Whse., Inc.	124
Kneeland, Bill	103
Knickerbocker Stge. Co.	127
Knickerbocker Stge. Whse. Co.	113
Knickerbocker Whse. & Stge. Co.	125
Knoxville Fpf. Stge. Co.	135
Kohl Stge. Co., J. Leo	87
Kroeger, Jos. J.	115
<b>M</b>	
LaCrosse Term. Whse. Co.	139
Lakewood Fpf. Stge. Co.	128
Lancaster Stge. Co., Inc.	131
Langan Fpf. Stge. Co., Ben A.	111
Lansing Storage Co.	107
Lasham Co., Edward	92
Lawrence Whse. Co. (Oakland)	83
Lawrence Whse. Co. (San Francisco)	84
Lazarus, F. G.	130
Leclerc, Whse. Co.	126
Lee Brothers, Inc.	121
Lee & Sons Co., H. C.	129
Lee Term. & Whse. Corp.	88
Lehigh & New England Term. Whse. Co.	130
Lehigh Whse. & Trans. Co.	115
Lenon, Virgil F.	96
Lenta Transfer Co.	125
Leonard Warehouses, Inc.	117
Lincoln Fpf. Whse. Co.	139
Lincoln Safe Deposit Co.	121
Lincoln Storage Co.	127
Lincoln Storage Warehouses	113
Long Beach Trans. & Whse. Co.	81
Long Island Storage Whses.	116
Long Warehouse Co., S. N.	111
Los Angeles Warehouse Co.	82
Louisville Public Whse. Co.	99
Lyon Fpf. Stge. Co.	82
<b>N</b>	
McCann's Fpf. Stge. Whse.	124
McCormick Whse. Co.	101
McDougall Term. Whse. Co.	108
McLaughlin Whse. Co.	100
McNally Bros., Inc.	117
Maier Sales & Storage Co.	138
Marshalltown Fpf. Stge. Co.	98
Matheson Warehouse Co.	134
Meadowbrook Stge. Whse. Co.	113
Mercantile Stge. & Whse. Co.	112
Mercer Trans. & Stge. Co.	97
Merchandise Storage Co.	128
Merchants Stge. & Trans. Co.	81
Merchants Transfer Co. (Marion)	129
Merchants Transfer Co. (San Antonio)	137
Merchants Trans. & Stge. Co. (Ill.)	95
Merchants Trans. & Stge. Co. (Iowa)	97
Merchants Warehouse Co.	104
Merchants Whslng. Co.	134
Meridith Stge. & Trans. Co.	94
Metropolitan Fireproof Whse.	121
Metropolitan Moving Co.	124
Michigan Term. Whse. Co.	105
Midland Whse. & Trans. Co.	93
Miller North Broad Stge. Co.	132
Miller Trans. & Stge. Co., J. E.	139
Millward, W. R.	99
Model Storage Warehouses	115
Moeller Trans. & Stge. Co.	80
Monarch Stge. & Whse. Co., Inc.	117
Monroe Warehouse Co., Inc.	123
Montgomery & Co.	131
Monumental Stge. & Carpet Cleaning Co.	101
Morgan & Brother	121
Mott Haven Stge. & Whse. Co.	122
Muegge-Jenull Whse. Co.	127
Murdoch Stge. & Trans. Co.	133
Murphy Trans. & Stge. Co.	109
Muskogee Trans. & Stge. Co.	130
<b>N</b>	
Nash Moving & Stge. Co., Al.	126
Nashville Whse. & Elevator Corp.	136
National Bonded Warehouse	89
National Freight Forwarding Co. (New York)	122
National Freight Forwarding Co. (San Diego)	83
National Storage Co.	107
National Trans. & Stge. Co., Inc.	86
National Warehouse & Dist. Co.	137
Neal Fireproof Stge. Co.	127
Niagara Stge. Whse. Co.	117
North Eastern Stge. & Dist. Co.	104
Northern Ave. Stores & Dock Corp.	103
North Pier Terminal Co.	93


(Continued on page 153)

## SHIPPERS INDEX—Continued

(Continued from opposite page)

<b>O</b>	
O. K. Stge. & Trans. Co. (Louisville).....	99
O. K. Trans. & Stge. Co. (Ft. Smith).....	80
O. K. Stge. & Trans. Co. (Memphis).....	135
O'Brien's Ppf. Stge. Whse. Co.....	118
Ohio Warehouse Co.....	128
O'Neill Bros. Trans. Co.....	95
Ontario Warehouse Co.....	93
Oregon Transfer Co.....	130
Orlando Bonded Warehouse.....	87
Oshkosh Storage Co.....	139
<b>P</b>	
Pacific Coast Term. Whse.....	82
Pacific Stge. & Trans. Co.....	138
Pacific Stge. & Whse. Co.....	112
Paddock Trans. & Stge. Co.....	129
Pagels Stge. Co., Fred.....	126
Park Stge. Whse. Co.....	112
Parke Warehouse Co.....	94
Passaic Transportation Co.....	115
Patterson Transfer Co.....	135
Peasley Trans. & Stge. Co.....	90
Penn. Term. Stge. Co.....	111
Penn. Trans. & Stge. Co.....	133
Petry Express & Stge. Co.....	115
Pettit Stge. Whse. Co.....	95
Phila. Local Express Co.....	133
Pittsburgh Trans. & Stge. Co.....	98
Post, Robert F.....	134
Poston Stge. Whse., Inc., John H.....	135
Premier Ppf. Stge. Co.....	82
Price-Bass Co.....	136
Prindle & Co., M. B.....	138
Prudential Stge. & Moving Co.....	83
<b>Q</b>	
Quackenbush Whse. Co.....	134
Quincy Market Cold Stge. & Whse. Co.....	102
<b>R</b>	
Radial Whse. Co.....	110
Railway Term. Whse. Co.....	93
Rathbun Cartage Co.....	129
Ray's Trans. Co.....	136
Reed Trans. & Stge.....	95
Replogle Stge. Co., I. D.....	131
Rice Stge. Corp., A. C.....	118
Richards Storage Co.....	107
Richmond Stge. Whses.....	122
Ricks Stge. & Dist. Co.....	109
Riverside Stge. & Cartage Co.....	105
Riverside Truck & Stge. Co.....	104
Robinson Storage Co.....	105
Rochester Stge. Whses.....	123
Rock Island Trans. & Stge. Co. (Ill.).....	95
Rock Island Trans. & Stge. Co. (Okla.).....	130
Rockford Storage Warehouse.....	95
Rogers, Arthur G.....	112
Rosenthal Fireproof Storage.....	98
Rueker Bonded Whse. Corp.....	125
<b>S</b>	
Safety Storage Co.....	115
Safety Trans. & Stge. Co.....	100
Sage Trans. & Stge. Co.....	85
St. Paul Term. Whse. Co.....	109
San Francisco Warehouse Co.....	84
Santini & Son, Inc., A.....	122
Savannah Bonded Whse. & Trans. Co.....	90
Schaefer & Son, Inc., Wm. H.....	86
Schantz & Co., Joseph A.....	123
School St. Stge. Whse. Co.....	104
Seobey Ppf. Stge. Co.....	137
Scott Bros. Ppf. Stge. Co.....	128
Security Stge. & Power Co.....	128
Security Stge. & Trust Co.....	101
Security Stge. & Van Co.....	108
Security Stge. Whse. Co.....	113
Security Warehouse Co.....	89
Seneca Warehouse Co., Inc.....	124
Shank Ppf. Stge. Co.....	96
Skellert Co.....	108
Smedley Co.....	86
Smith's Trans. & Stge. Co.....	87
Soo Terminal Whse.....	93
South Jersey Whse. Co.....	132
Southee, John B.....	116
Souther Warehouse Co.....	84
Southern Tier Stge. & Sales Co.....	118
Southwestern Trans. & Stge. Co.....	99
Sprague Storage, Marvin.....	103
Standard Storage Co.....	103
Stanford Trans. & Stge. Co.....	80
Stockton Trans. Co., Jos.....	93
Strahon Trans. & Stge. Co.....	137
Strang, Inc., Chas. D.....	117
Strang Whses., Wm. H.....	117
Sunrise Storage Co., Inc.....	122
<b>T</b>	
Tabb Stge. Whse. & Frt. Trans. Line.....	100
Tenn. Term. Whses., Inc.....	136
Terminal Whse. Co. (Little Rock).....	81
Terminal Whse. Co. (Omaha).....	112
Terminal Whse. Co. (Phila.).....	132
Terminal Whse. Co. of R. I., Inc.....	134
Terminal Warehousing Co., Ltd.....	140
Tiffany Fireproof Storage Whses.....	122
Tonnes Trans. & Stge. Co.....	109
Tooker Stge. & Forwarding Co.....	122
Topeka Trans. & Stge. Co.....	99
Tripp Warehouse Co.....	96
Troth Trucking & Whse. Co.....	112
Tucson Whse. & Trans. Co.....	80
Tulsa Stge. & Trans. Co.....	130
Twentieth Century Stge. Whse. Co.....	133
Tyler Whse. & Stge. Co.....	137
<b>U</b>	
Union Delivery Co.....	84
Union Storage Co. (Dayton).....	128
Union Storage Co. (Erie).....	131
Union Stge. & Trans. Co.....	87
Union Stge. & Whse. Co.....	124
Union Term. Whse. Co. (Jacksonville).....	87
Union Term. Whse. Co. (Los Angeles).....	83
Union Transfer Co.....	125
Union Trans. & Stge. Co. (Lexington).....	99
Union Trans. & Stge. Co. (Tampa).....	87
United Ppf. Whse. Co.....	139
United States Storage Co.....	87
United Whse. Co. (Seattle).....	138
United Whse. Co. (Wichita).....	99
Universal Term. Whse. Co. (Galveston).....	136
Universal Term. Whse. Co. (Houston).....	136
<b>V</b>	
Valley Van & Stge. Co.....	81
Virginia Bonded Whse. Corp.....	137
Vittur Trans. & Stge. Co.....	89
<b>W</b>	
Warner Ppf. Stge. & Truck Co.....	129
Wallace Trans. & Fwdg. Co.....	126
Ward & Bro., Hugh F.....	122
Warner Warehouse Co.....	97
Waterbury Storage Co.....	90
Welcker Trans. & Stge. Co.....	85
Western Michigan Trans. & Stge. Co.....	107
Western Warehousing Co.....	93
Westheimer Warehouse Co.....	137
Westland Dist. & Stge. Whse. Co.....	83
Whistler Trans. & Stge. Co., C. R.....	96
Wiggin Terminals, Inc.....	103
Wiley & Nichols Co.....	136
Wilkes-Barre Warehousing Co.....	134
Williamsport Stge. Co., Inc.....	134
Wilshire Ppf. Stge. Co.....	83
Windsore Storage Co.....	128
Winslow Trucking Co., Inc.....	124
Withers Trans. & Stge. Co., John E.....	87
Wittichen Coal & Trans. Co.....	80
<b>Y</b>	
Young, William.....	122
Younts Cartage & Stge. Co.....	130
<b>Z</b>	
Ziegler Schaefer Co.....	126

(For Index to General Advertisers, see page 150)



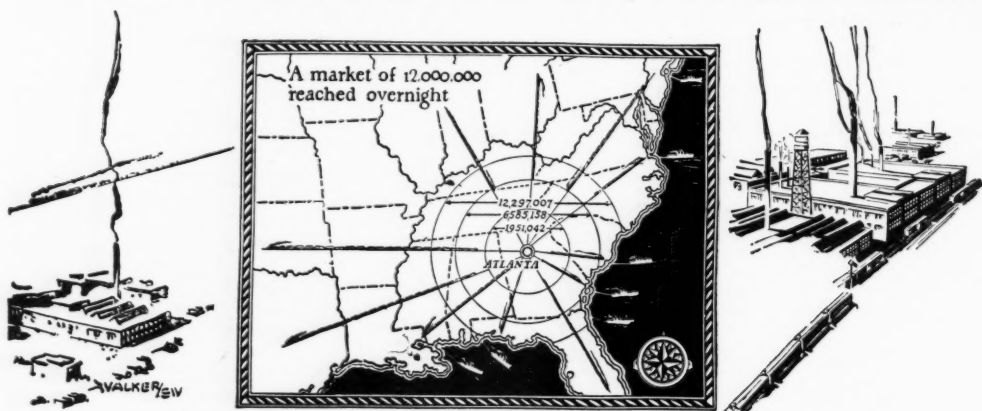
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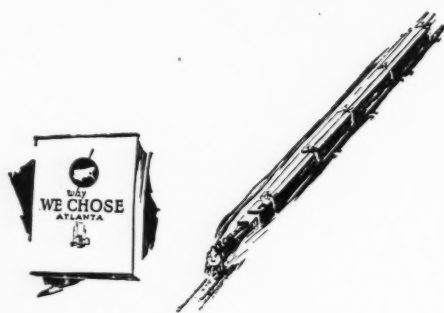
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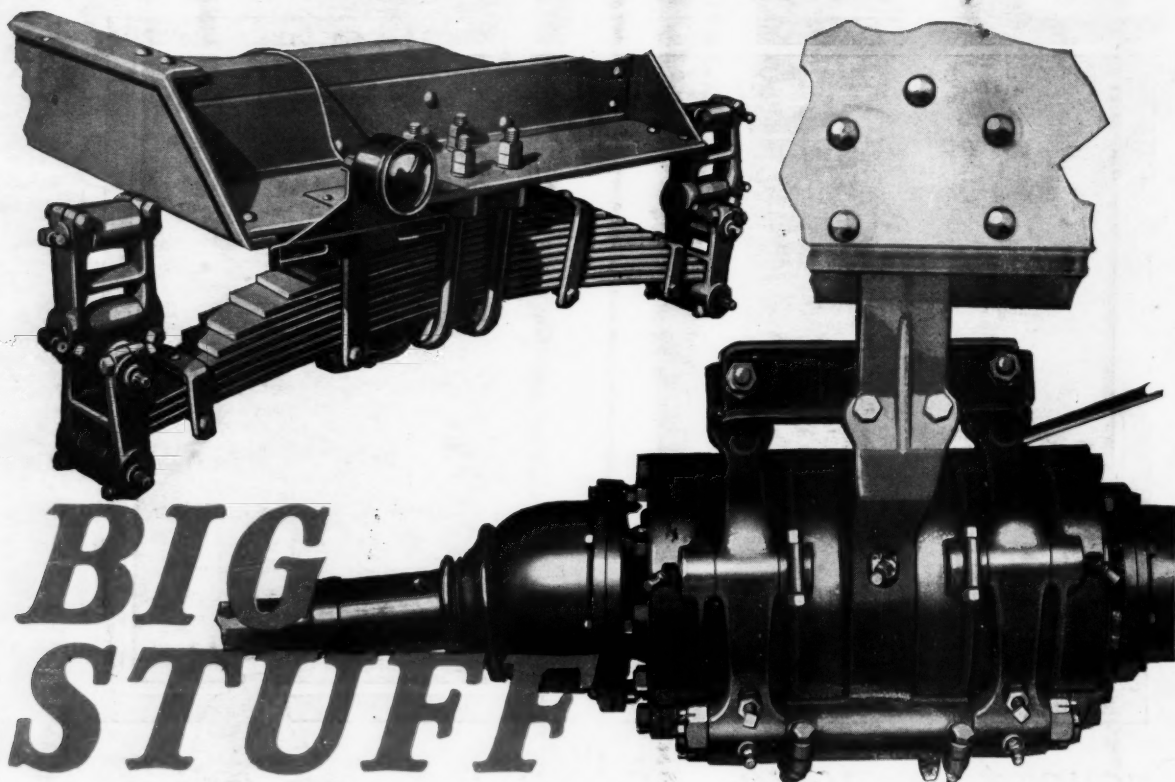
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